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2 SuperDisks!**

Amiga versus PC

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FIVE Floppies Full of Super Stuff! On these disks!

The Great AUI SuperDisk collection this month includes:
Perplexity - Encode your secret files.
NoHsc - Grab back the lines lost from your non-PAL software.
AlphaSpell - A clever Shell-based spell checker.
Promotor - Upgrade your screens to sharper resolutions.
SCopy - Easy replacement for the Workbench Copy command.
Extractor - A Shell driven UU and XX encoder/decoder.
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And there is much more.

Boot this disk install to floppy or hard drive
Requires Workbench 2.0 or above, and at least 1Mb of RAM
Some software is AGA only

April 1996

NO DISK?

Ask Your Newsagent!
Or see the **SuperDisk**
Pages in this issue.

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The Great AUI SuperDisk Collection this month includes:
DiskSpace 3 - the latest release of the program that allows you to squeeze more out of a floppy disk.
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SimpleButtons - for left handers only.
Amiga Data - a smart demo of a database written in Amos.
RemData - a superb reminder program. Plus a whole lot more.

And The Great AUI Games Disks: a **Charlie Chimp** sequel to our popular recent SuperDisk giveaway, a whole bunch of two player strategy games for the discerning mind, and a couple of light cycle TRON-style sweat inducers. Enjoy!

To use this disk you must first boot using SuperDisk No. 79
Do not try to access from Workbench

April 1996

NO DISK?

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SIGGRAPH and The Toaster

Special Report
JTS Palladium

New Slim Line Amiga HD
Computer Graphics II
MPEG Revealed



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CONSTANT FACTORS

5 The Amiga Dimension

Managing Editor Antony Jacobson found that even in sunny Cannes a festival of Multimedia may reflect old ideas in a new media.

8 SuperDisks No.79 & No.80

The Easter Bunny only dishes out eggs, but **AUI** has a much better offering: the SuperDisks. **AUI**'s SuperDisks, which are the envy of the other Amiga magazines, are crammed full of the most useful utilities you'll ever see, a spectacular sequel to our popular Charlie Chimp Christmas game, and... you'll just have to unpack them to find out. Imdad Shah suffers compression to bring them to you.

16 NewsFile

From Rotten Apples to firings at Amiga Technologies, computers going boom and balls up for bugs, it's the whole neverending story of what goes up and what gets them down that **AUI**'s Anthony Mael and Martin Witton report in the NewsFile.

72 Amiga Answers

By air, by land, and by sea, the questions arrive incessantly. And through **AUI**, they are resolved by the all-knowing guardian of the answers, the Amiga Guru himself, Andy Eskelson. So if you are confounded by your computer, or trying to unravel the mysteries posed by your monitor, then take advantage of **AUI**'s Amiga Answer Machine.

This month's AUI cover picture was provided courtesy of Premier Vision. Everything in the scene was modelled and rendered using Lightwave 4.0 on an Alpha based Raptor 3 clocked at 266MHz. The cockpit took just under a week to construct and surface. Image sequences for the display screens and HUD were created in Brilliance, and composited with 3D rendered models within Lightwave. The planet, lasers, and "real" explosion were rendered as a separate scene and used as a backdrop image. For more about the magic of computer graphics contact: Premier Multimedia Tel: 0171 721 7050.

83 The PD Stakeout

One month drought, the next flood, David Ward discovers that the Public Domain, is never constant but always entertaining.

87 Write to Reply

Protected by the sign 'Beware of the Bud!', **AUI**'s rancorous respondent dishes out pain and suffering to those that raise his hackles, or acid drops and boiled sweets to those that don't. Dare you enter the realm of terror?

TEST DRIVE

30 CD Round Up

CDs for the Amiga are being released in greater quantities than software on floppy disk. David Ward examines the latest issues that make art, DTP, and video work, that much easier.

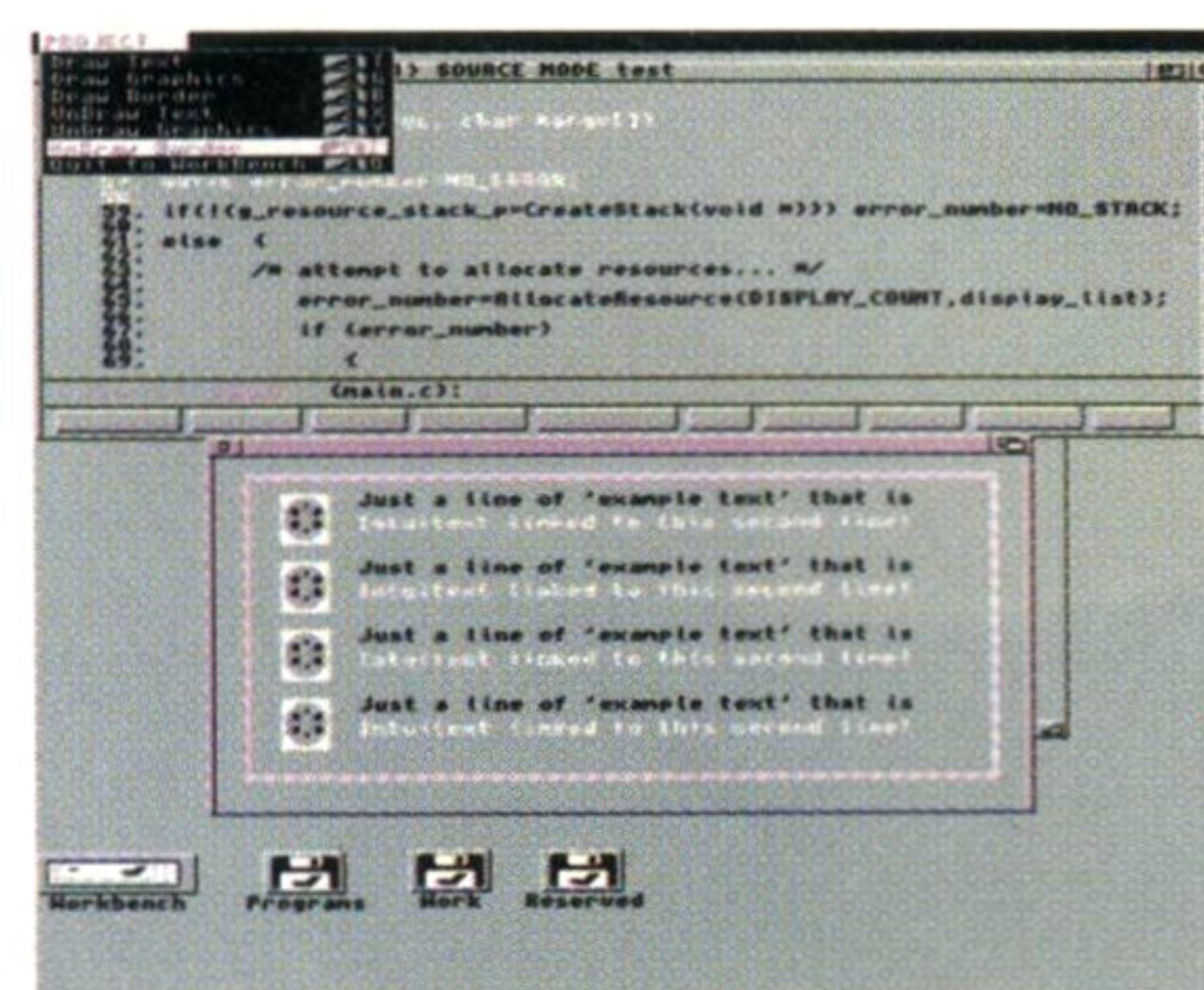


32 JTS Palladium

Ultra-slim is often used to describe cigarettes or tampons, but David Ward tests out a new hard drive that is an ideal recipient for the title. Discover how 850Mb enters the body of an A1200 without surgery.

34 OctaMED 6 on CD

The Amiga world's leading module composition software is taken for a spin by Paul Overaa. We already know it's the best, but there is more on offer from the extra storage space afforded by the silver platter.

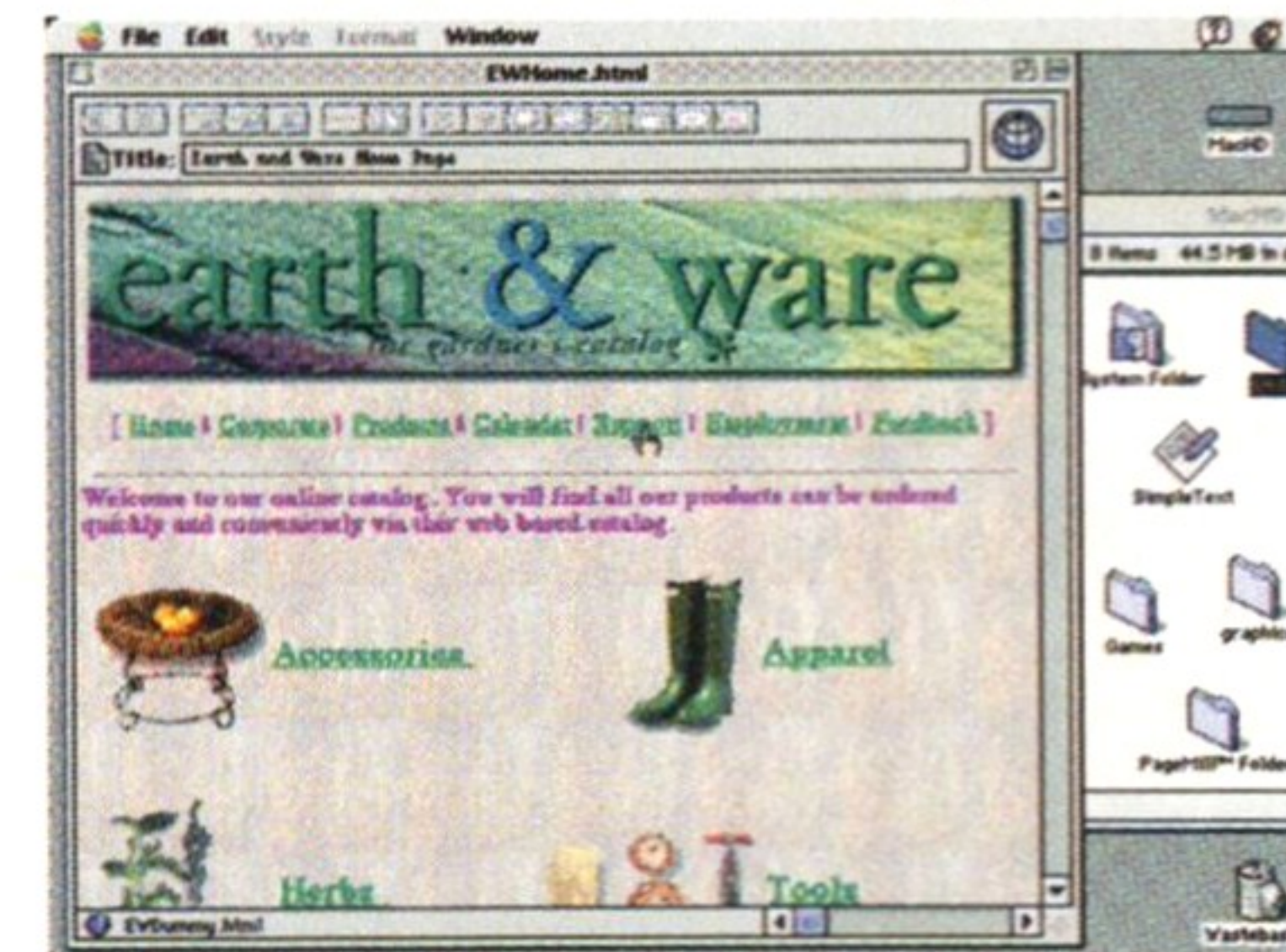


36 DICING with it

Paul Overaa puts down his keyboard to pick up DICE, the increasingly popular C programming language compiler for the Amiga.

38 Rival Worlds

The arguments have raged back and forth. The PC camp becoming ever stronger with the release of faster processors and Windows 95, while the Apple Mac flounders. Is the Amiga standing on a threshold of something good or disastrous? Gary Fenton outlines the pros and cons of the different systems.



FIELD REPORT

50 It's a Weird Wired World

Phil Osborn endured the crowds at two big conventions in the USA; SIGGRAPH, the computer graphics and animation festival and The Toaster Conference, for users of the TV effects wonder box powered by the Amiga.

USER PORT

64 Hard Driving Part 4

"You can never have enough...", says Alan Lewis as he describes how to add extra hard disk space to existing Amiga set-ups. IDE or SCSI? The advice is his, the choice is yours.

HARD COPY

61 Online Books

David Ward stayed awake in bed to read, an unusual change of habit, so that he could review a selection of books that make the cybersurfer's life that bit easier.

62 Star Trek: The Hard Copy

Planned for last month's **AUI**, David Ward and Imdad Shah shoulder their way into this issue to bring you a choice of books to suit every kind of Star Trek fan.

MENTOR

82 ARexx Advice

Accessing the Amiga's Serial Device is the choice of subject for this month's guidance from resident programming ace Paul Overaa. Let him show you how easy and flexible this scripting language is.

ENTERTAINMENT NOW

69 Crash, bang, wallop.

David Ward swoops down from the skies in the helicopter sim Zeewolf 2, while Ashley Cotter-Cairns skids into the crash barrier from Xtreme Racing. He shouldn't have tried to play Pinball Mania at the same time.



AUI SERVICES

35 Subscribe!

How and why to subscribe to the world's longest established Amiga magazine - and there is an astounding free offer of Data-chrome too. What did Sarah-Jane Clifford-Jones have to do to get this for such a generous special offer?

40 Back Issues

Despite being desperately ill, you crawled down the road, coughing and spluttering, to get to your local newsagent for a copy of **AUI**. They were sold out. Of course. You should have subscribed, shouldn't you? You still want that issue? Here it is - put aside just for you, and your £5.

67 Readers' Survey

Do we give you what you want from **AUI**? Here's your chance to tell us. And you can win a stereo player for your trouble.

88 Arena

In the Arena a large number of number of eager companies wishing to show off their stunning products to you present their (soft and hard) wares. Peruse and choose.

94 Advertisers' Index

Where you can find those who want you to know what you want to buy when you need something to help you know more about the Amiga.

TECHNOWORLD

Martin Witton boldly leads the AUI team out into the TechnoWorld

41 Seeing is Believing... Maybe Part 2

AUI's team of technofreaks, lead by the screen-eyed Martin Witton, conclude their report on the ever expanding world of computer graphics.

48 Computer Graphics Now

If you couldn't get down to the south-west and Paul Hamilton's recent exhibition of his computer generated art, then don't worry, **AUI** has brought the art to you. Stand back and admire the images from the comfort of your own home.

54 Dambusters

Relive the heroic World War II Dambusters raid as Wil Mobberley guides you through the flak to describe how he recreated the attack, using Lightwave, for an upcoming TV documentary.

60 The Online Column

Anthony Mael plugs himself into cyberspace to bring you the latest on what he sees floating by in the digital domain. The flow could be stemmed if Governments have their way.



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Subscriptions Address: AUI Subs. Dept.
Customer Interface Ltd, Bradley Pavilions,
Pear Tree Road, Bradley Stoke,
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Published by AUI Limited

Origination and Colour Reproduction:
Ford Graphics, Ringwood, Hants.

...And What They Used

Commodore's Amiga 500, 500+, 2000, 3000, 1200, CD32, Almathera's Photogenics and Parnet, Arnor's Protext, ASDG's Art Department Professional 2.5, Canon's BJ-20 BubbleJet, Commodore's 1942 and 1084S monitors, Citizen's Swift 240C, Consultron's CrossDOS, Datel's Action Replay MKIII, Digita's Wordworth 3.1, Discovery Software's Grabbit, Epson's GT9000 flatbed scanner, Electronic Arts Deluxe Paint IV, Gold Disk's Professional Page 4, GVP's A530 Turbo, GP Software's Directory Opus 5, HiQ's 1500, John Velduis' VirusChecker, JVC's HR-D980 video recorder, Micro-System's Scribble!, Macro-System's VLAB, OpalTech's OpalVision, Paravision's SX1, Philips CM8833-II monitor, Supra's V32/288 Fax Modems.

Distributed by COMAG Ltd

Amiga User International - an independent magazine for Amiga computer users - is not connected in any way with Amiga Technologies. It is published 12 times per year on the first Thursday of the month. The publishers do not accept any liability for any incorrect statement or errors contained in material that may be produced from time to time.

Printed in the U.K.

The Amiga Dimension

MILIA is probably not a name familiar to you. Yet it has become one of the most important gatherings in the world of technology or at least for what is accessible through technology. MILIA is the French acronym for International Publishing and New Media Market, and it takes place in Cannes on the French Riviera. Yes, the same expensive Mediterranean resort as the Film Festival a couple of months later.

As is suitable for a young, technology rather than star, based industry MILIA is also very much less glamorous than the Hollywood-style PR bash that makes and breaks multimillion dollar movies. And it must be admitted that the south of France sunshine in winter is very preferable to slushing it to an office in dull and cold London.

The climatic difference was not the reason that I attended and nor was it, I would guess, the motive that took to MILIA luminaries of the computer industry whose names may well be known to readers of **AUI**. They were serious about it and at £400 entry fee per person they had to be.

Geof Heath, for those with long memories, of Melbourne House, but now boss of Mindscape/Software Toolworks - owned by the multinational Pearson Group - was there, as was the man in charge of Mindscape's European development Jim Mackonochie, erstwhile boss of Mirrorsoft and who also headed CDTV development at Commodore. Peter Bilotta also of once Mirrorsoft where he was MD, but now top man at Interplay; Andrew Hewson of 21st Century, the Pinball game company; Kieron Sumner, now of Goldstar, ex-multimedia manager at CBM UK and others. Known faces in an unfamiliar place.

The reason that they, and another 10,000 or so attendees, were at MILIA was "content". This was a "marché" - a market - for buying and selling what would appear on CD or Online around the world in the next year or two. MILIA wasn't a market for technology itself, but for what that technology would offer us - the "content" - to use and enjoy.

A part of the involvement was for games, as can be seen from the some of the names of the company representatives I have listed, but there were also people from TV, film, database ownership, magazine, radio, even book publishers and "content" owners, buying and selling material they considered that the public would want on CD or online.

Many nationalities, from Japanese to eastern European, were there trying to guess what would be commercially successful in their patch of this new media world, and to attempt to persuade others that the products they had brought were of universal appeal. MILIA started just three years ago in its present form. Previously it was a market merely for illustrated books.

How the world has changed, you might say, but has it? True, the "new media", the CD or the Internet, offer different and potentially profitable means to reach the consumer. Yet the main problem is not the media. It is the "content". Strip away the technology and you were back in a Gutenbergian world. There were atlases, lots of them; encyclopaedias, loads of them; language courses and children's stories; soft core porn... It was like being in an updated book shop. Click here and get some data that moves - video clips - but it was more likely to be still pictures and text. For "content", or our ability to use it imaginatively, hasn't changed all that much. When you think of the number of books published each year - some 50,000 different titles in the UK alone - you KNOW that publishers are optimists. They are also notoriously bad judges what the public wants. There are legendary stories of authors like P. G. Wodehouse being turned down by 26 publishing houses before one saw what is now considered genius, and for decades has been an international best seller.

One computer games publisher gazed at the stands around us and commented to me "How many of these titles do you think will ever get on the shelves?"

The problem is not whether the programs will be finished. Many of them were still at the concept stage, or very little further advanced. The expertise available to create saleable titles is probably even rarer in the "new media" than it is traditional publishing. The difficulty is that the willingness of the public to buy them is unknown. How many language courses can you take, how many encyclopaedias do people want to own? Will the new media on which these products are being distributed really enhance the value to the user over what can be achieved in conventional publishing?

Many of the products there, it seemed to me, were like projects for "coffee table" books, but would cost more than them too. If computers and the Internet are to be a part of a really mass market, then publishers will have to find ways of interesting the mass of consumers. If they don't satisfy that mass market more imaginatively, the cost to them may be higher even than expensive Cannes hotel bills and MILIA entry fees.

Antony Jacobson
Managing Editor and Publisher

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Benchmarks

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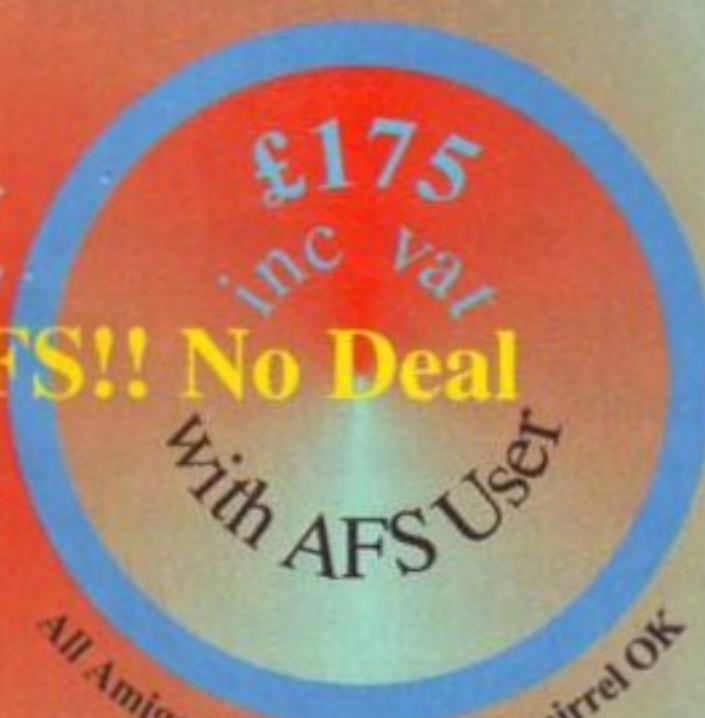
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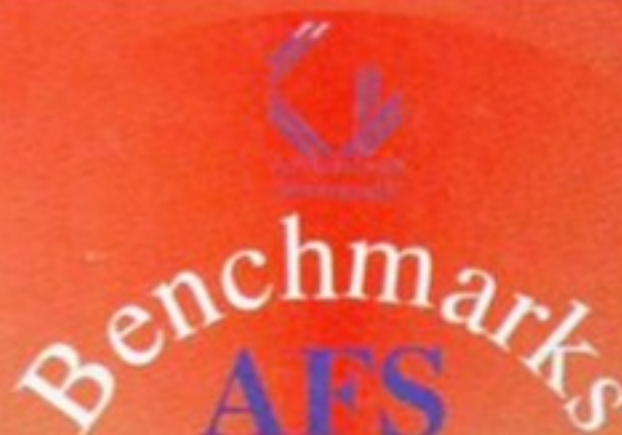
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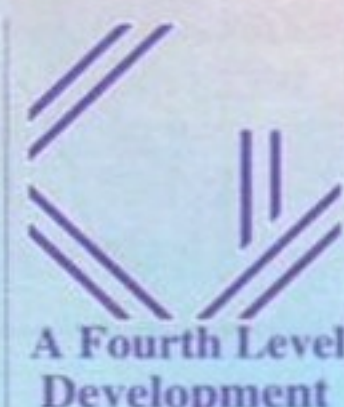
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The Great AUI SuperDisks No.79 & No.80

Deep below ground, in a suitably shielded bunker, AUI's team of ant-like SuperDisk compilers work incessantly in their quest to bring you the best Amiga utilities in the cosmos. Imdad Shah now informs you of what they have salvaged from deep space and brought back for your delectation.

The Great AUI Utilities Disk No.1

AlphaSpell

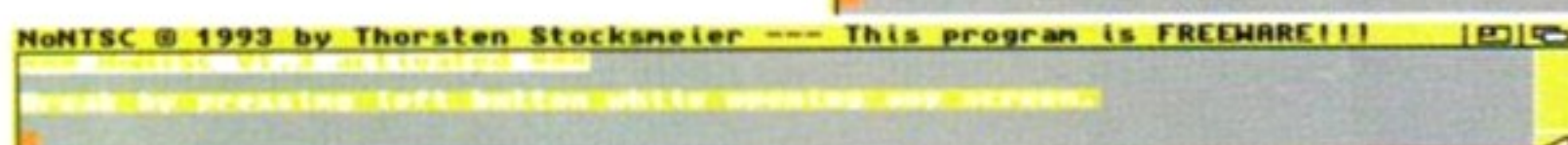
Having a little trouble with your spelling? Let us put an end to that then. AlphaSpell is a spell checker. Plain and simple. It spell checks any ASCII text file (by that we mean in the English language just in case you got really excited), and informs us of its findings. We hope you have no more problems with your spelling from now on. No excuses.

problems with finding functions etc. when your sources grew too big?

If you answered "Yes" to either or both, hold onto your hat and take a ride with FSLIST.

```
Output Window
AlphaSpell 4.00 - A Command Line Spelling Checker
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This is freeware distributed under the terms of the GNU
General Public License version 2 published by the FSF.

Usage: AlphaSpell <SIF> Source Dictionaries ...
spellcheck - Lists each unfound word.
ound - Lists each found word.
Usage: AlphaSpell <DIJT> Word Dictionaries ...
uess - Lists its guesses at the word you want.
umble - Lists each word with the same letters.
est - Indicates whether it finds the word.
Usage: AlphaSpell <RIM> Dictionary1 Dictionary2
remove - Prints Dictionary2 w/o the words from Dictionary1.
erge - Prints the combination of the two dictionaries.
Usage: AlphaSpell <CIEN> File
ompress - Prints a dictionary in compressed form.
xpand - Prints a dictionary in uncompressed form.
umber - Indicates how many words are in the file.
Usage: AlphaSpell <F> Source min_num min_len caps
eed - Lists each word that passes through a filter.
```



NoNTsc

If you have ever used NTSC software on your PAL Amiga's Workbench, you must have notice an anonymous black section at the bottom of your screen. This is especially annoying when you can not move your mouse below the 200 pixel boundary associated with NTSC screen.

NoNTSC, a little gem of a utility, converts NTSC screens to PAL screens. It does this by looking for all 200 pixel high screens (NTSC) and converting them into 256 pixel high screens (PAL). Now there's a clever idea, don't you think?

FSLIST

Are you a programming type who likes C? Have you ever had

FSList opens a window on your CygnusEd screen with a list of the functions and structures it found in your source. From here you can easily jump between the functions and structures in your source. Since FSList also can show structures, it is also great for large include files such as intuition/intuition.h. Paul Overaa eat your heart out.

Promotor

Need a promotion? Ask your employer about that. If, on the other hand, you are a bit fed up with the way the Amiga or rather Workbench handles your screens, then you can use Promotor, as it allows you to change almost any feature of any screen. It offers you an easy way to cus-

tomise your screens to your own taste.

Extractor

Extractor is a powerful utility that lets you perform operations that are essential to using any network for data/file transfer. When a binary file is sent through a network it must first be processed into ASCII format.

Since a binary file may contain unreadable characters, a special process called UUencoding is done. This process turns the binary file into a file of readable (but gibberish) characters. UUdecoding is the inverse process to return an

encoded file back into its original state. Extractor does both UUencoding and UUdecoding. In addition, large files may be split into parts for transfer along the network. Extractor will decode these multiple parts back into original form for you.

As well as the UU form of encoding/decoding, Extractor will also do XXencoding/decoding. XX is a special form that is used to transfer files between certain Bitnet configurations.

ECSLaunch

ECSLaunch is a petite utility which will help AGA Amiga and Multiscan monitor users run software which screws up when run from a DbINTSC/DbIPAL Workbench. ECSLaunch requires a minimum of Kickstart 2.04 to run, and should help ECS users who use Multiscan/productivity screen modes.

SCopy

SCopy is a very handy utility. It is a replacement for the standard Copy commands, which can be

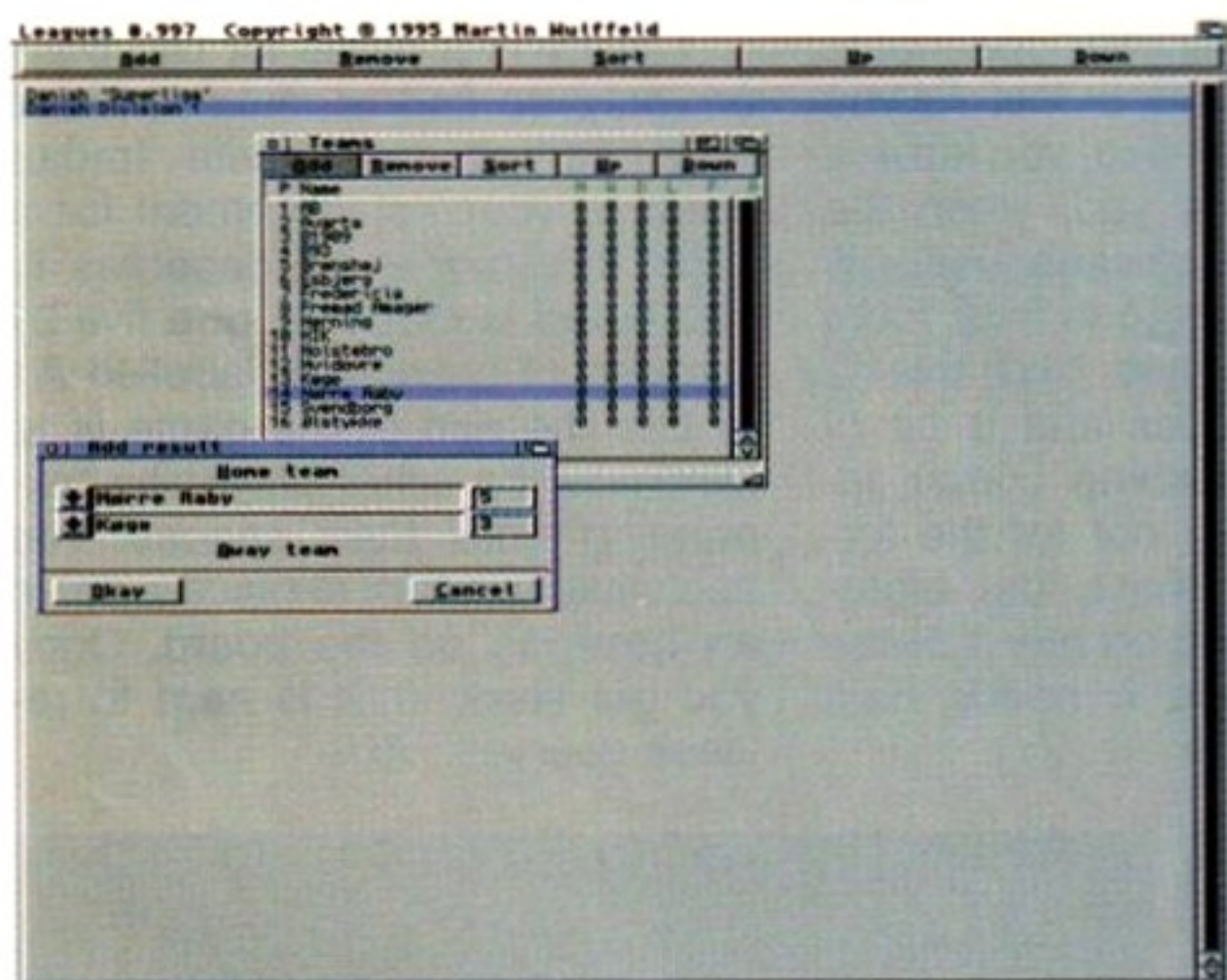


found in the C directory. Where SCopy differs, is that it displays a very agreeable window showing you its progress during copying. This, you should find, is far more useful and friendly than the standard (deceased) Commodore offering.

Leagues

Leagues is program which helps you to record valuable information about teams in a league. You can use it for keeping track of your favourite team's results during a season, but it is designed in such a way that you can also use it for predicting the next match results. There is no specific function for that, but by using the different facilities, and comparing team data you can somehow predict the outcome of the next matches.

No guarantee, of course, but if you get all eight draws on the Pools, then we'd appreciate a six figure contribution to the Holiday Away From Brum Fund, which has its headquarters, as you probably know, in the Seychelles.



Perplexity

Perplexity is an interesting little utility which encrypts data very securely. If you have some files that need protection from prying eyes, then this could be the solution for you. In optimum conditions the author claims that a hacker has to go through more combinations than there are quarks in the universe to get into this.

We do not know about you, but we sure do know there a quite a

few quarks in the universe. A quark, for those of you who do not know, is the basic building block of electrons, protons, and neutrons (see you learn something new from **AUI** everyday - subscribe now!)

For those who are in the hacking business, then Perplexity challenges you, as a file has been included for you to attempt to decrypt. Bet you can't make it.

The Great AUI Utilities Disk No.2

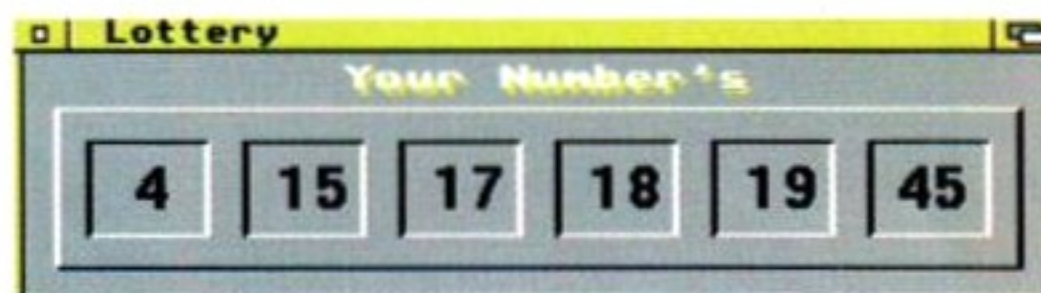
Diskspare 3.0

One of the SuperDisks secrets is about to be unveiled to you. The actual production of the SuperDisk is a jealously guarded secret and this is what has kept our SuperDisks in a league of their own. Now dear readers, we all owe a debt to this smart package, without which **AUI** could not have supplied you with that extra 84k of COMPRESSED data every month.

Diskspare is an innovative new disk format, which is far superior to any other disk format on ANY other computer. It allows you to store 964k of data on a double density floppy disk.

Considering that the capacity of such a floppy is typically about 1024k unformatted, this is a remarkable feat, only achieved by changing the track construction of the disk a little bit.

However, what this means to us, is that we can store more data per disk than otherwise would have been possible. This new version also supports High Density drives, so you can have even more benefit with them!



Lottery

It seems we are all plagued by lottery fever. We talk, sleep, and swear by the lottery. I hear stories of people fantasising about the lottery and what they are going to do with their virtual money. Now cut down on the fantasy and try to make it a reality with this program.

Lottery does not claim to make you a lottery million, but who does these days? It might have a snowball in hell's chance of getting you get the numbers right, as they are selected at random, but when you do... Remember us at **AUI**, eh? (Yes, more contributions to that Get Out of Brum Fund, please.)

DecimalRead

Decimal read is like using the command TYPE filename HEX, but it does a decimal dump instead hence the name DecimalRead. Very useful.

SwapButtons

If you are left handed, then you might SwapButtons useful. This utility swaps the mouse buttons around (rest assured - not physically), so the left mouse button becomes the right and vice-versa. Yes naturally, you want to confuse the world, don't you?

SoundTest

If you hook your computer to the hi-fi, at times you may want to know if you have wired the sound channels to their correct sides. This utility will do a quick sound test and by the end of it you should be a bit wiser, at least as far as the wiring is concerned.

SayTime

Okay "Time". Oh, not me - the computer. This

utility will cause the computer to tell you the time in a verbal manner. Useful if you are so lazy, that you cannot be bothered to read it from your computer's display or if you are sight impaired. Years ago the Amiga had its own voice before Commodore stupidly dropped the device. It had been very popular with people who had sight problems. SayTime might be helpful to them if they are still Amiga users.

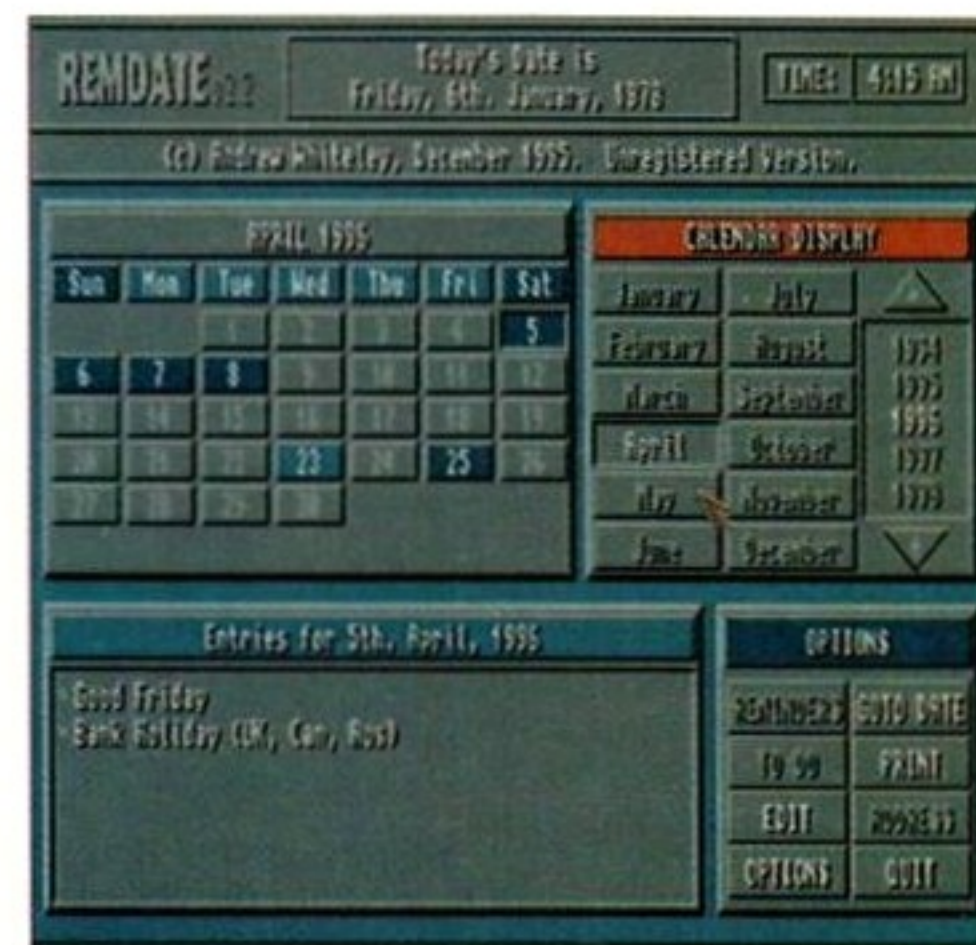
Amiga Data

Amiga Data is a database program. It is pretty basic, but it is pleasantly laid out and easy to use. At present you can enter data about your games, software, or hardware.

The Great AUI Utilities Disk No.3

RemDate

If you are constantly forgetting birthdays, appointments, and so on. You may be happy to know, you are not the only one. RemDate helps solve this little problem. It is an electronic diary, where you enter important dates, and you will be reminded of the events as they are about to happen. Never again will you miss an important date. (What! Is she still waiting outside the ice rink?) Be sure to check with RemDate first otherwise, or it will be back to square one!



The Great *AUI* Games Disk No.1

Charlie Chimp

II

If you cast your mind back to



the February SuperDisks, then you may remember Charlie Chimp Special Edition '96. This game has proved so popular that we had to include the sequel. For those of you who are not familiar with the prequel, go out and get a back issue of *AUI* now.

As in the earlier version, you are still Charlie Chimp (surprise, surprise). The aim, is to complete each level as quickly as possible, without getting killed. Obviously there are nasties to stop you in your tracks, however you are armed with a rather dangerous weapon which seems to go very well with the baddies. Collect the usual items for bonuses. Paint the levels in order to complete them. And don't get paint everywhere!

The Great *AUI* Games Disk No.2

Blocks

Blocks is a really simple concept. All you do is try to match the left-hand side puzzle to the right-hand puzzle by rotating coloured blocks. This may sound simple at first, but when you start to play it, it gets REALLY difficult. If you have

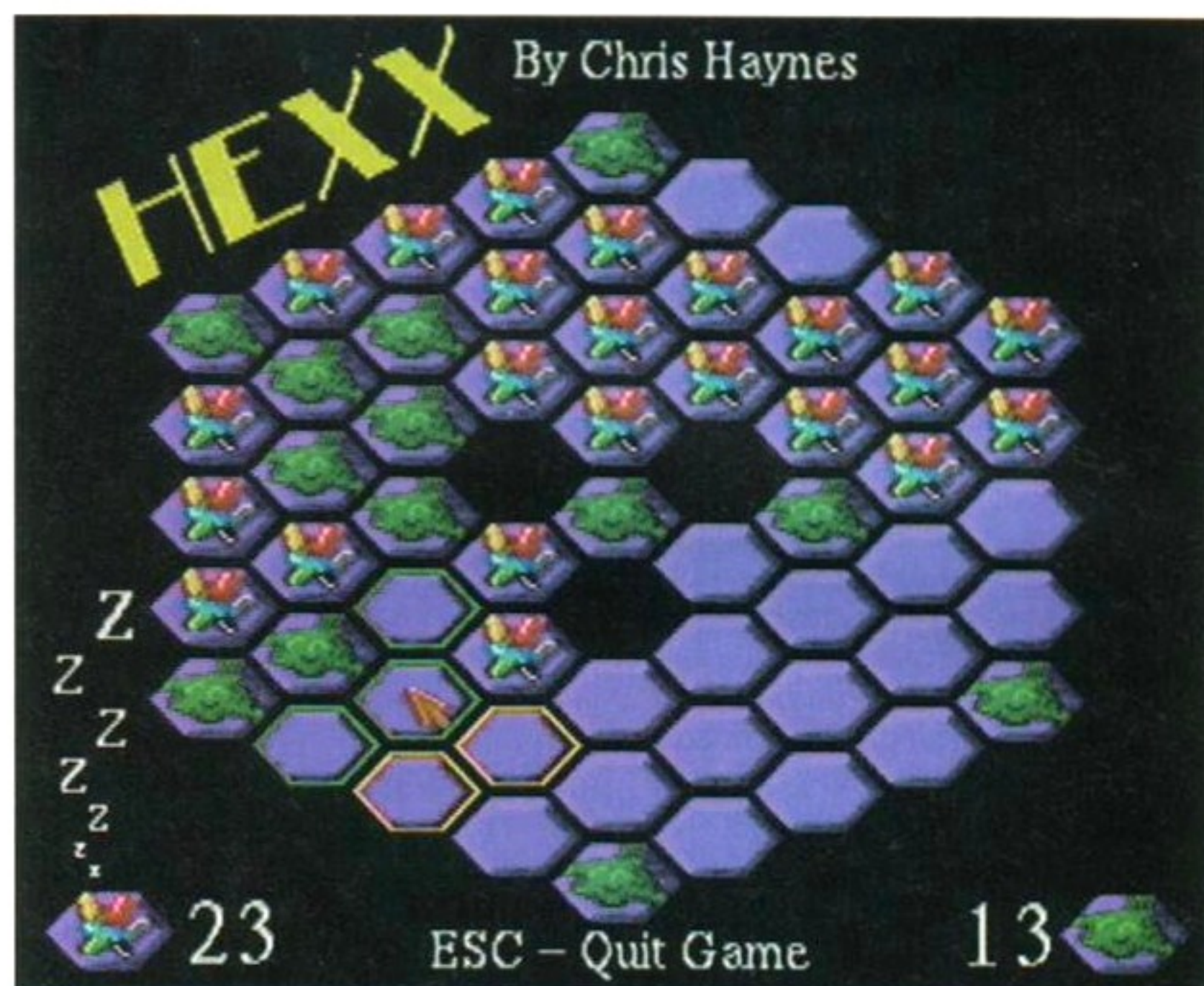
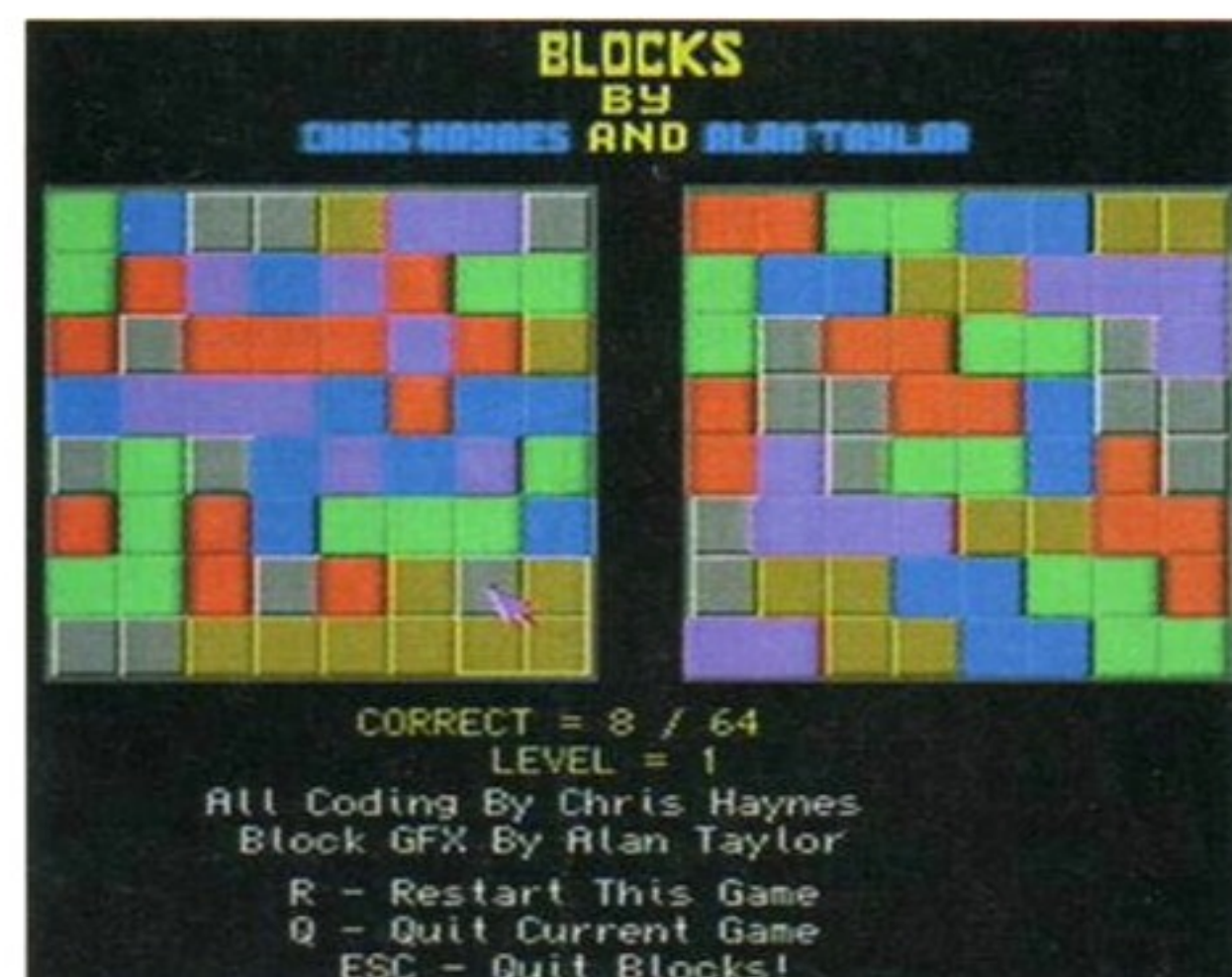
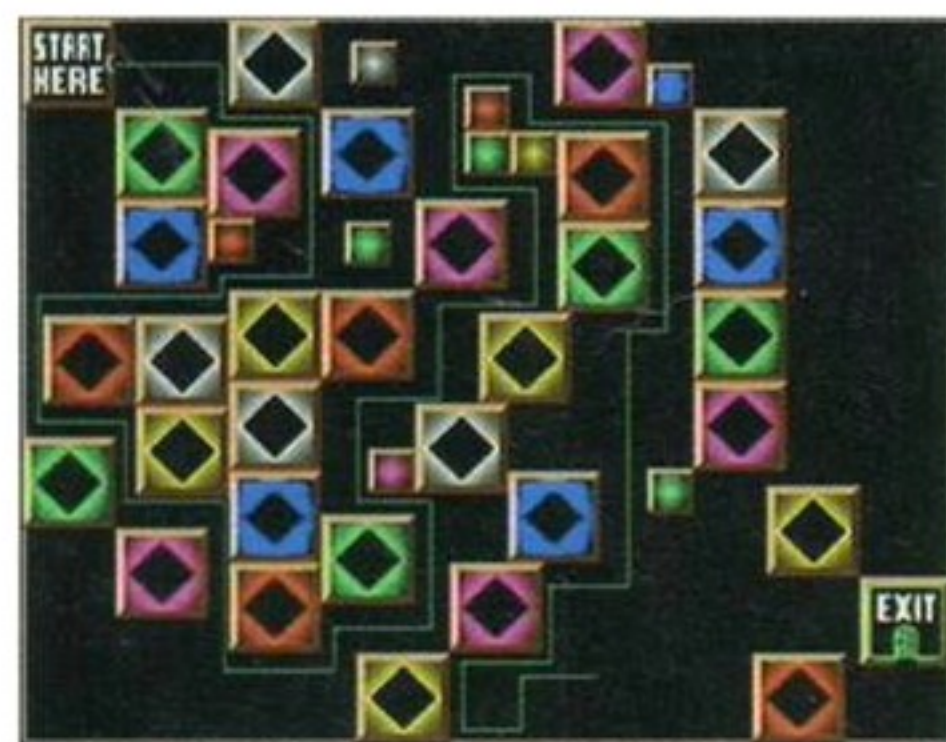
an important appointment - that date which RemDate reminded you about, don't start to play Blocks, you may still be bashing at it when she has gone from the ice rink door.

Hexx

Hexx is played on a hexagonal board. Each player starts with three pieces of his/her own colour and tries to battle it out with the other players in order to survive. You'll struggle to get the best of your opponents with this one. Similar to Othello.

C-Light

You control a device of some sort, quite what it is does not really matter, because the aim is to reach the end of a level without colliding with any obstacles. It does get very tricky, so only the best will survive. A sort of solitaire TRON-type game. Are you one of the fittest?



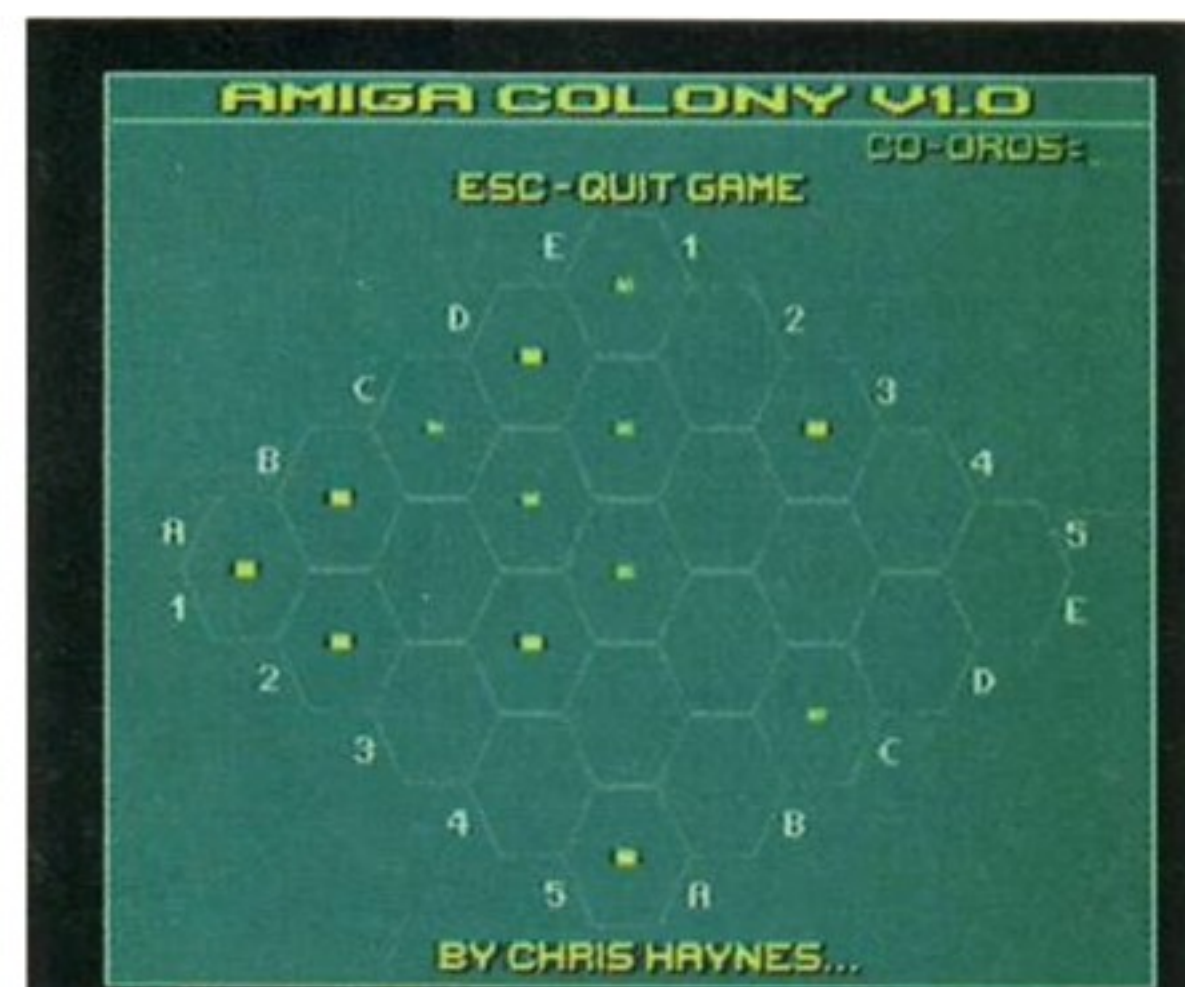
LightSpeed

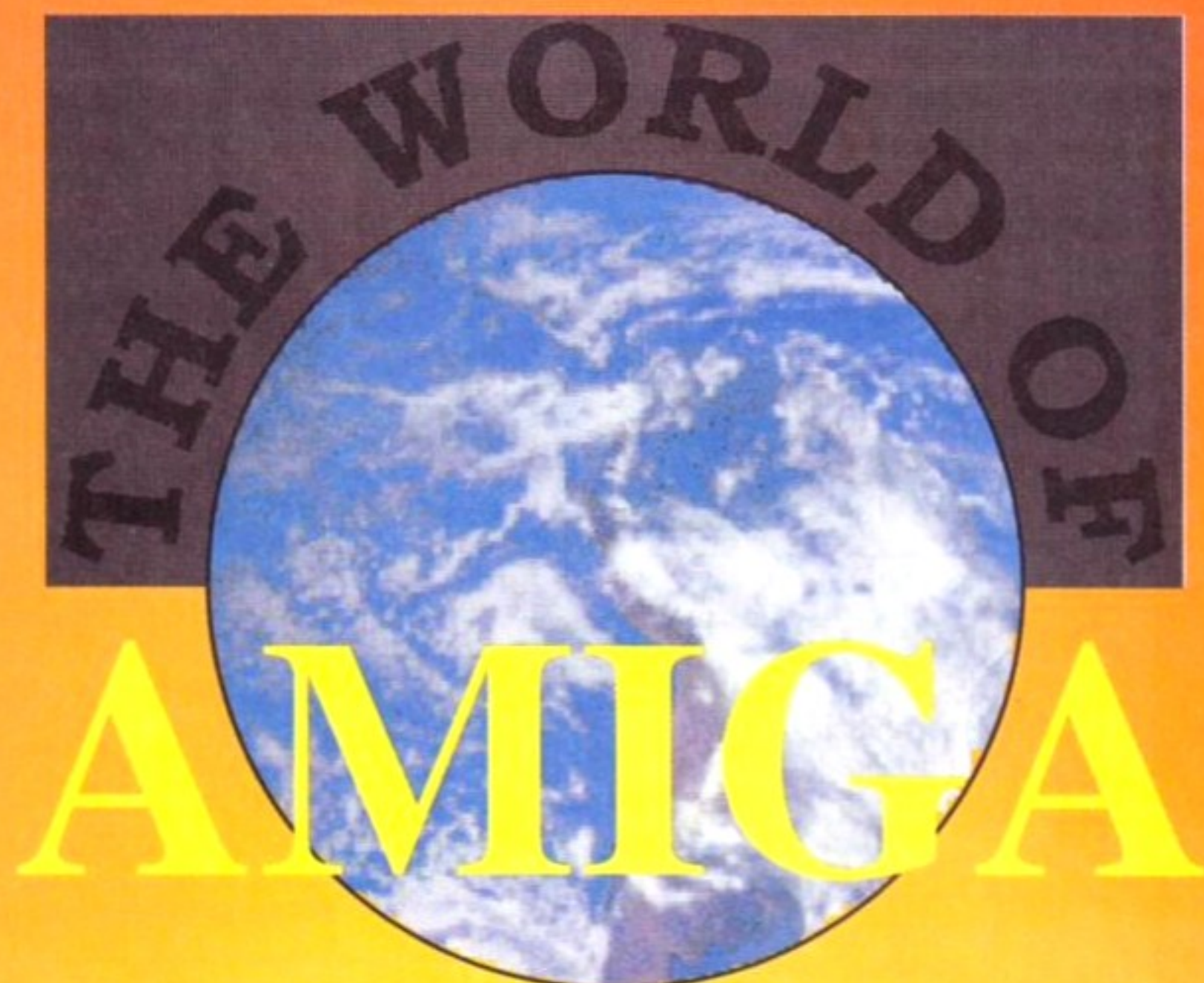
This is a playable demo of the TRON genre (if such a thing exists). It looks very good and is also highly addictive. The aim is to block off all your opponents by fair means or foul. As you move, snail-like, you leave a trail behind you, when the game progresses you will find that there is little room to manoeuvre and this is where tactics and a bit of joystick bashing comes in. We usually opt for the former, but that's us. LightSpeed runs on any 1.5Mb+ Amiga, and it needs Fast RAM.

Colony

This jewel is a territory game of skill and advanced-thinking, so you're in for a real treat (if you like that sort of thing).

Colony is a game for two players only, so find or make a friend now! Failing that invite Imdad Shah to your establishment for a good thrashing - he deserves it. The board is made up of a five by five grid of hexagons, labelled A1 to E5. The aim of the game is to eliminate the other player by "expanding" into their spaces. You each take it in turn to place a dot in an hexagon on the board. Once you get stuck in, it is hard to release yourself. *AUI*





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DISK INFORMATION

Additional Information

Floppy Users

You can install to any disk except this month's SuperDisk. When asked whether you want to install to floppy or hard drive, select 'f'. When prompted, insert your destination disk into df0: - the internal drive. This disk will then be formatted.

Installation time varies according to the amount of information we have compressed onto the SuperDisk for you. Some installations may require some disk swapping.

Hard Drive Users

You can install directly to hard drive. Boot SuperDisk No.79 as you would for a floppy installation, and select the disk you wish to install. When asked whether you want to install to floppy or hard drive, select 'h'.

You will then be presented with a list of devices to which you can install, and the amount of space available on them. bear in mind that to install the whole set of disks will require somewhere between 2 and 3 Mb.

The installer will create a drawer with an exact copy of the floppy version of the SuperDisk in it. This includes startup-sequences, fonts, libs, and so on. Delete those that are unnecessary, and move any files in the libs, fonts, devs, etc., to their appropriate places.

Please note that the default tool for any text or document files will need changing from 'least' to your favourite, or just place a copy of least in your C directory.

You cannot install to any path that contains the following letter sequence: 'df', 'pc', 'ds', 'ram', or 'cd'. This is to save confusion with existing Amiga devices.

Expert Users

Installation directly to hard drive is so easy that we recommend you take advantage of our installer. However, if you want to do things the hard way, please remember that SuperDisk No.80 is in the diskspare format and requires you to have diskspare.device installed in your devs/DOSdrivers drawer.

All the necessary files - diskspare and UnLzx - can be found on SuperDisk No.79 and, as an expert user, you don't need us to tell you how to find and use them.

Viruses

During compilation we constantly check the SuperDisks with the latest versions of the best anti-virus software we can find. Although, to be on the safe side, we suggest you do the same prior to installation.

Shutters

Before installing the SuperDisks we recommend that you check the metal shutters on the disks for damage. This is best done by gently sliding the cover back and then letting it spring back under its own power. If it sticks, or if it appears to be coming away from the plastic casing, then DO NOT INSERT IT into your drive. You may not be able to retrieve it.

Damaged disks should be returned, see below. Neither **AUI**, the Publisher, or the disk duplicators, are liable for any damage caused to your machine by failure to following these simple guidelines.

Returning your SuperDisk

In the unlikely event that your SuperDisk is damaged or simply does not run then please return it to: TIB PLC, TIB House, 11 Edward Street, Bradford, BD4 7BH enclosing a stamped, self-addressed, envelope. A new SuperDisk will be returned together with the postage costs you incurred.

Technical Support

TIB operate a technical support line if you need advice. They can be reached weekdays between 10am and 12:30pm, or between 1:30pm and 4:40pm, on 0891 715929

This is a premium rate line, and calls are charged at 49p per minute. Please do ask for permission of the phone owner before making the call.

Important Information

All the software included on the SuperDisks is thoroughly checked on several machines before we even consider using it. After compilation the SuperDisks are installed to floppy and hard drive several times prior to duplication. And after duplication examples are selected at random for further testing.

While we cannot exclude the possibility of an error on our part, the most likely cause for a SuperDisk malfunction is YOU! Read the documents that came with the software you are trying to use. If there are libraries that need to be moved, or programs that need to be assigned, then refer to your Amiga's manual.

If you really get stuck then write in to Amiga Answers, enclosing a stamped, self-addressed, envelope for a quick reply. otherwise you could wait up to three months for the answer to appear in an issue of the magazine.

We regret that we CANNOT TAKE ANY TELEPHONE CALLS regarding the SuperDisks. They are too time consuming to answer and we are often busy getting the next issue of **AUI** together for you.

Reader's Contributions

Our SuperDisks are crammed full with the cream of the Amiga crop. Many of the programs are created especially for us and released into the Amiga community through **AUI**. You can make it possible for **AUI** to share this top quality software with tens of thousands of other Amiga users.

If you have a masterpiece that you think can cut it with the best, then please send it in to us for evaluation. You never know, you might end up famous. The address is: Reader's Contribution, Amiga User International Magazine, Unit 2, Utopia Village, Chalcot Road, London. NW1 8LX

Alternatively you could send us a UU-encoded file via e-mail to:

amigauser@cix.compulink.co.uk

Please remember we prefer stand-alone compiled programs, and don't forget to include any libraries or fonts that it might need - providing they are distributable. We don't want you to get done for piracy!

Shareware

Many of the programs on our SuperDisk are Shareware. This means that you can try them out, but if you use them regularly you should send the author the requested registration fee. This not only encourages the author to produce more work, they feel wanted, but you will often receive the latest version of the software.

Registration fees can be up to £20, but most hover around the £5 mark. You can send cheques to UK addresses, but those abroad often prefer US dollars. These can be sent by registered post, but sending cash is always a risk and it's your money.

Some authors may only want a postcard to see how far their program has got. Do make their day. after all, they made yours.

Compatibility

All the software on the SuperDisks runs on a basic A1200, most will work on a 2Mb equipped A500+. We deem this to be the minimum specification of Amiga nowadays and, as the A1200 is now the entry level machine, many programmers are only developing for this platform.

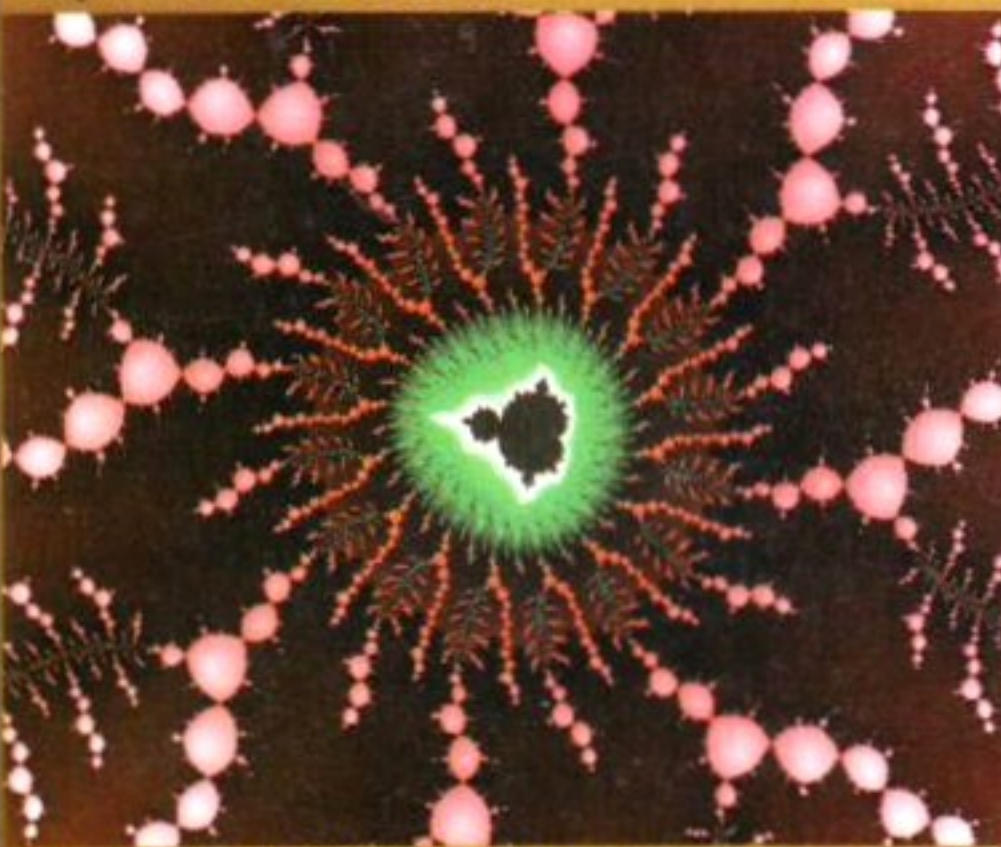
If you are still using Kickstart 1.3 then we are sorry we cannot accommodate you. To get the best out of your Amiga you must have a decent amount of memory - a minimum of 2Mb - and Kickstart 2.04/Workbench 2.0 or better.

Documentation

All the documents that accompany the programs on these SuperDisks can be read by simply double-clicking on their respective icons. The text will scroll under mouse control, and to exit just press the [Esc] key - top left on your keyboard.

Some files are in AmigaGuide format. They are recognisable by the node information within the text. To take advantage of these 'hyper' documents, you need to have either AmigaGuide or Multiview installed on your system, and to change the default reader tool from 'least' to the appropriate tools you usually use.

Any word processor should be able to load the document files as they are in an ASCII format. **AUI Enjoy!**



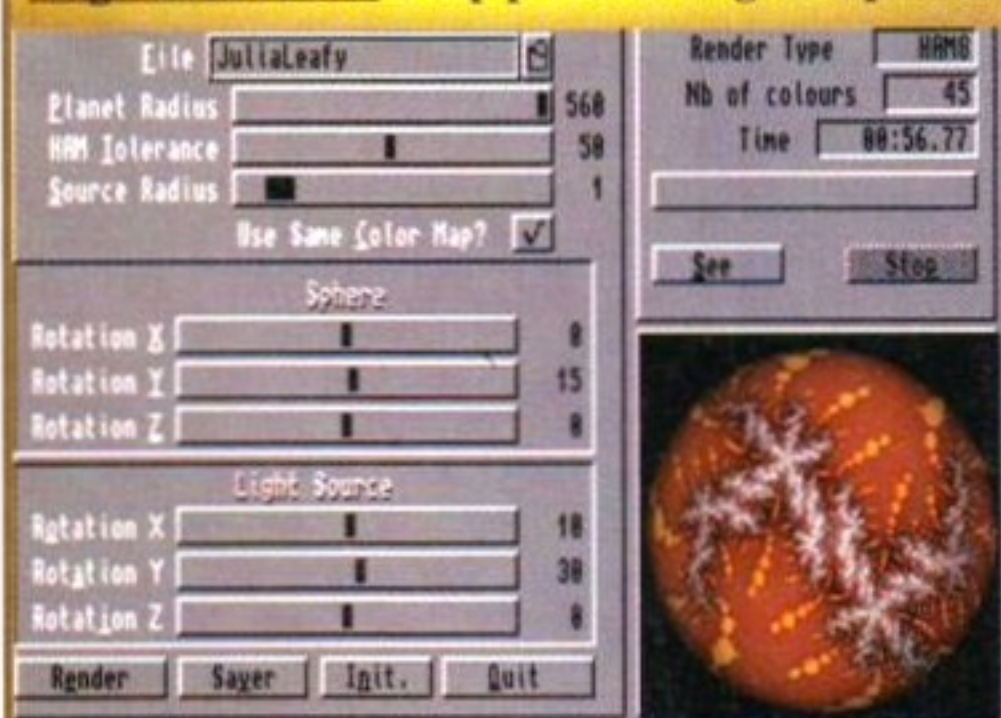
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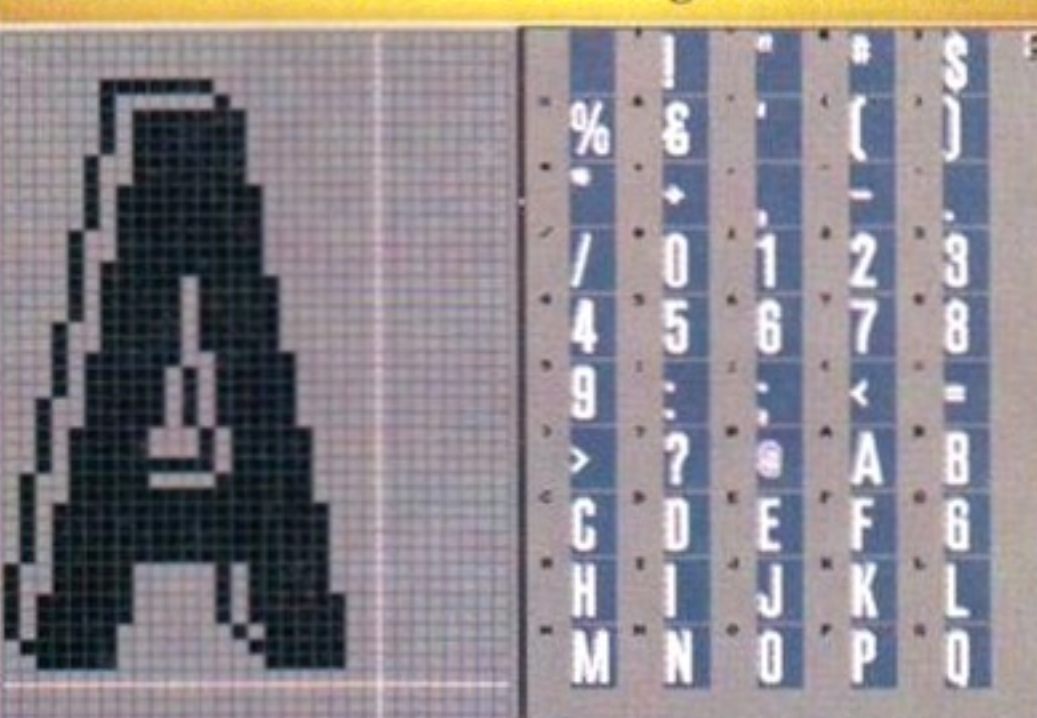
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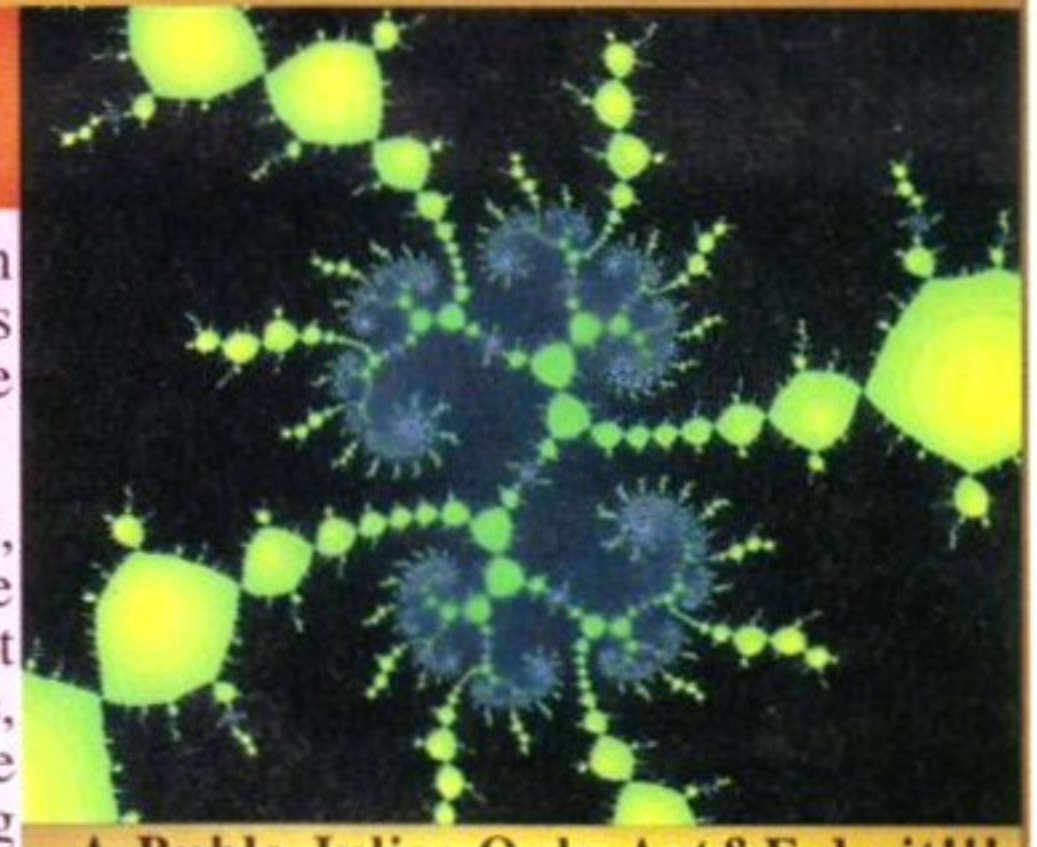
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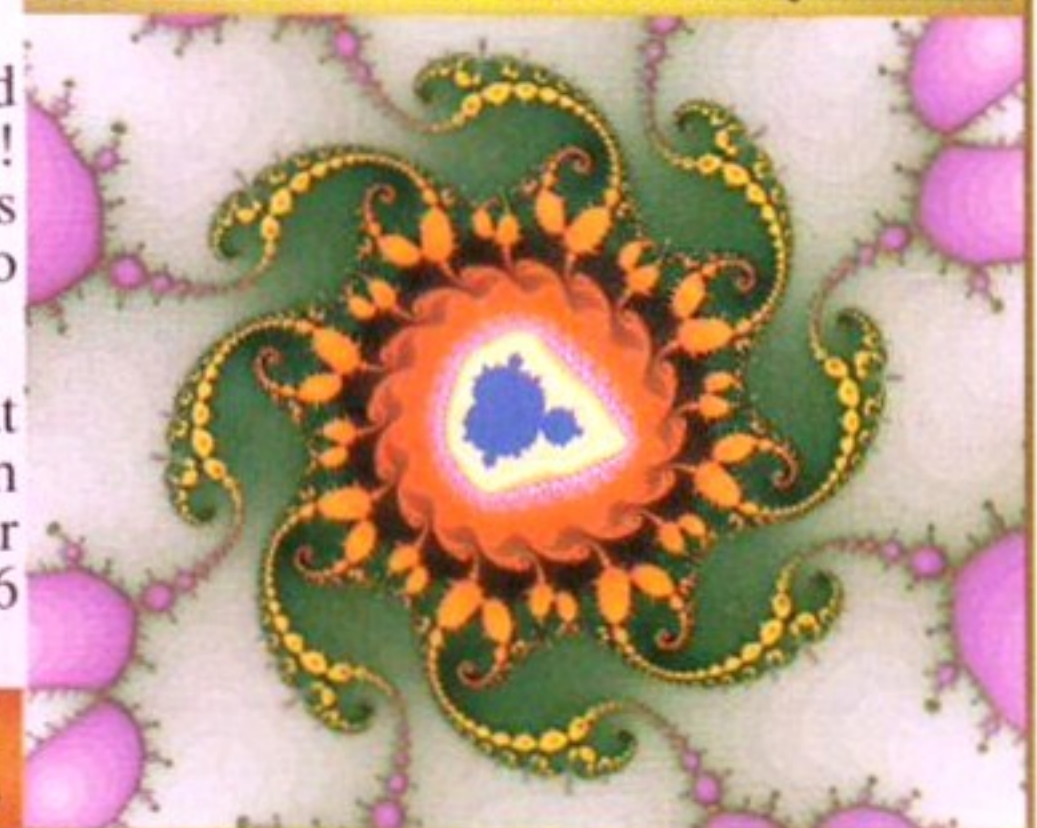
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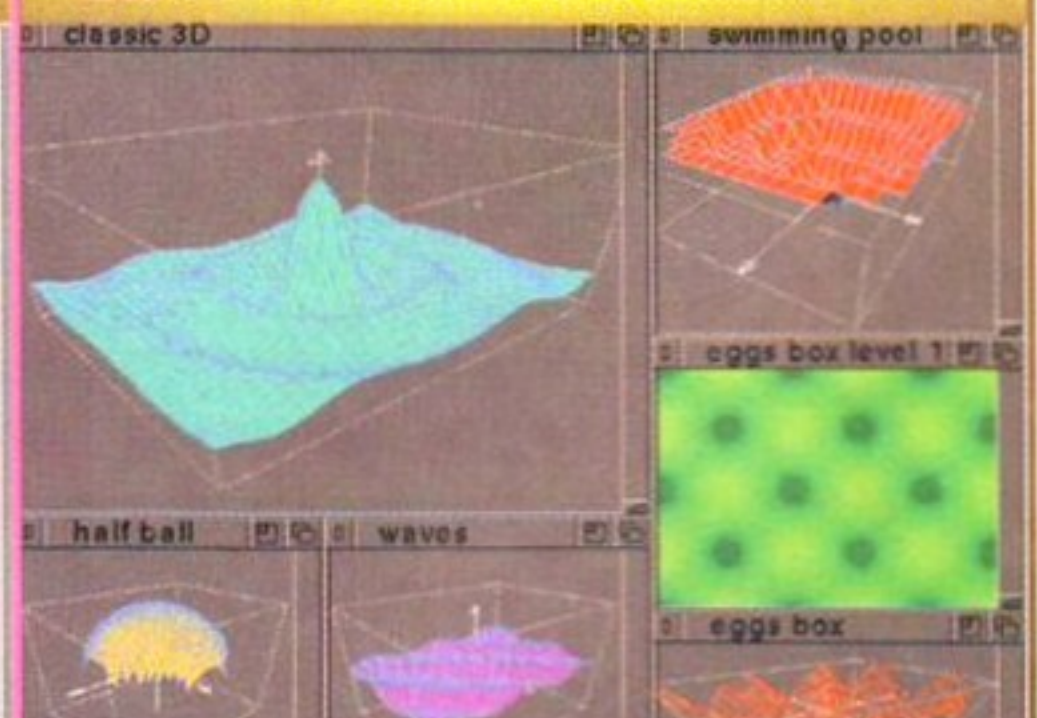
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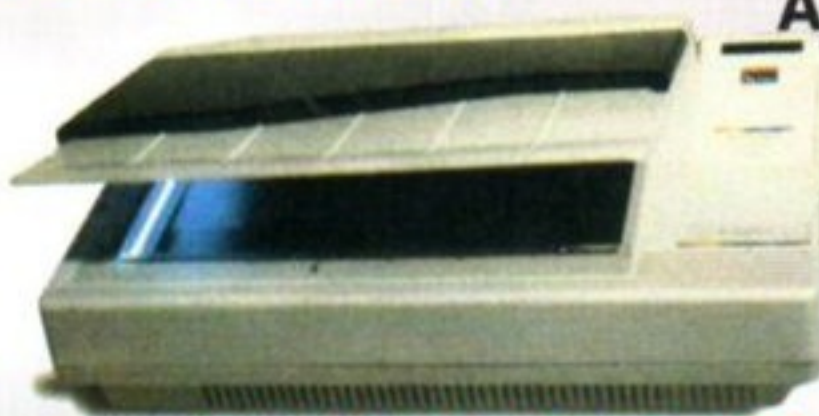
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Compiled and edited by Anthony
Mael and Martin Witton with
contributions from David Ward

Boom Go Computers

Computer sales are set to exceed the wildest expectations of retailers and manufacturers, according to a survey which shows that around one in five people are planning to buy a PC. A part of the study into direct mail, conducted by London company Consumer Surveys, asked more than a million people whether they had a PC, were intending to buy one, and whether they would welcome direct mail on the subject. The survey showed that of those questioned, 264,011 people already have a PC, with 220,406 planning to buy one and keen to receive relevant direct mail.

Bob Hayward, Consumer Survey's managing director told **AUI**, "With as many people who own computers now considering buying one, PC ownership is set to double. Our survey will be of particular interest to direct marketers because we have the names and addresses of 220,406 people who would welcome more information".

Should Amiga Technologies buy that list fast?

Contact: Consumer Surveys Ltd. 47-51 Southwark Bridge Road, London SE1 9HH Tel. 0171 403 6885.

Snoops Do

MI5 has been given sweeping powers to search confidential databases under the new Security Services Bill. A warrant to allow the new powers of search has to be approved by a Government Minister, not a judge, and some sectors fear this will lead to eavesdropping of telecoms, e-mail, and the census data too.

Corporate raid

Microsoft is to exercise its rights under the 'Microsoft Select' programme that allows it to 'raid' customers for unlicensed software. The 'Select' deal gives large buyers of Microsoft products a substantial discount, but it also allows Microsoft managed audits of the computers at these corporations. Up to 600 companies in the UK are involved.

Rotten Apple?

Apple Computer announced losses in the first quarter of £44 million, twice as bad as anyone had predicted. This news fuelled further speculation that Apple will be taken over in the near future. Possible saviours include Sun, IBM, Sony, or Oracle. To save some cash it is expected that between two and three thousand jobs will have to go over a period of time. Four vice-presidents have already resigned, and chief executive Michael Spindler has gone too.

The problem for Apple is simply the inexorable rise of the PC - Intel-based and driven by Microsoft's world domination of the software. Apple has tried the tack of cutting down its prices to consumer level for some of its machines but the general public, both business and the home user, cannot be convinced that the Mac, and not the PC, is the machine for the future.

The Mac still dominates in specialist areas such as professional DTP,

and to make that market profitable Apple has to keep the prices it charges for those machines at a higher level than the general public will pay.

So it is caught in a bind that is not dissimilar to that which Commodore suffered and which Amiga Technologies faces today. If you choose to go for one specialist sector of the market can you also take another, the mass market, as well? The answer for CBM was "No". When they went for the mass market with the A500 and its successors, they lost, to a large degree the serious users and certainly the business sector.

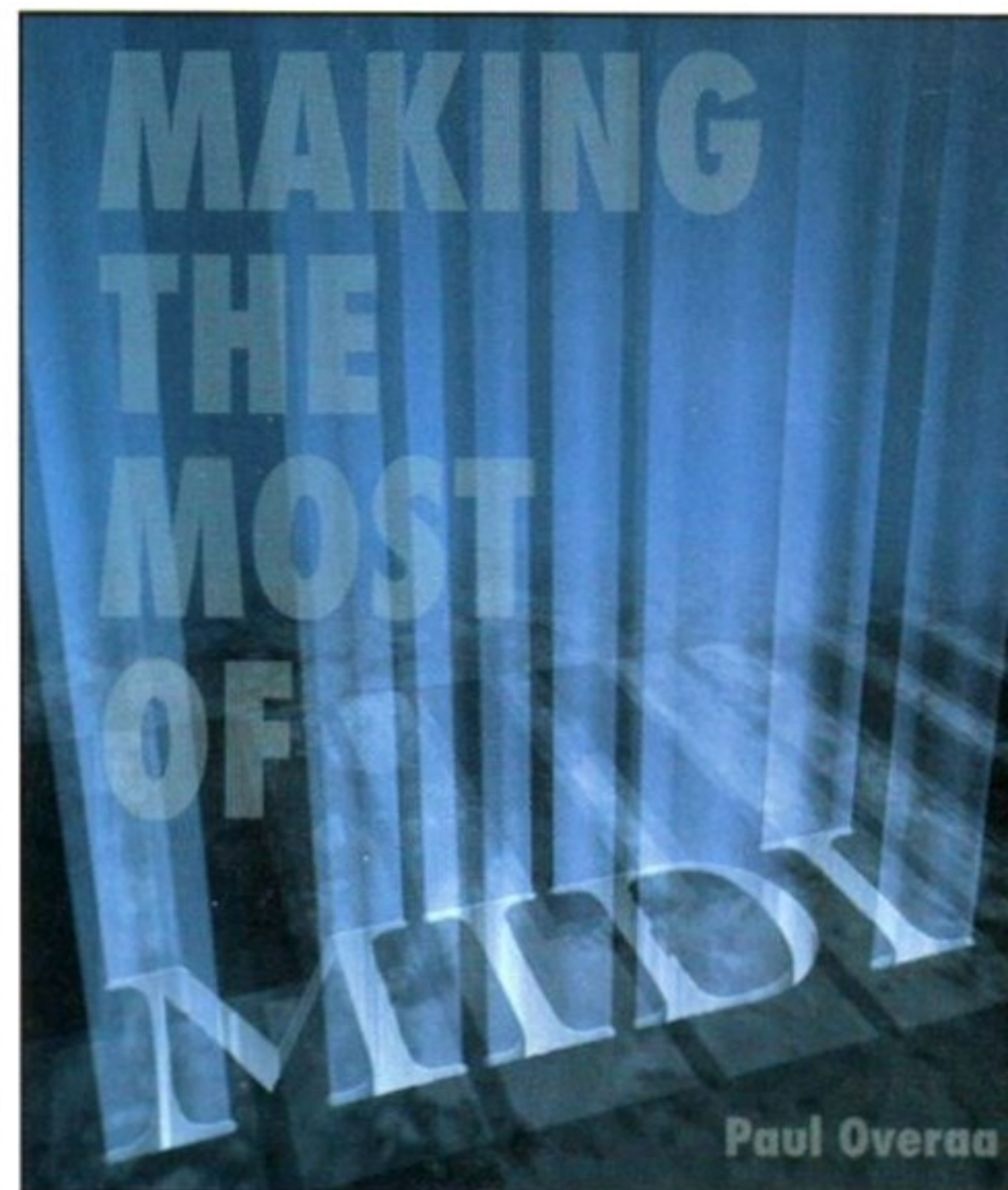
Apple has found that its timing was wrong to enter the mass market - they waited too long and let the PC get an irreducible lead and even apparently catch up on some its user friendly advantages such as the GUI with Windows 95. However, their ability to counter the perception of the PC as today's machine and their own

Mac as some high flown, expensive, computer for designers simply has not been strong enough.

They haven't, for example been able to get their non-specialist software into the big chains of stores where the public go to buy. Lack of mass distribution of software meant prices were higher, so sales were reduced and the spiral continued.

Now Apple look likely to return to their traditional strategy of aiming for the specialist, largely the professional DTP and video, markets which may be the only way that they can survive. That, though, in this world of hungry technology giants, means that they will remain relatively small and therefore a probable victim of a takeover and absorption into a wealthier group such as Sun Microsystems.

Doesn't the story seem a shade uncomfortably familiar to those of us who have followed the fortunes of Commodore and the Amiga?



Music book

Bookmark Publishing has announced its first book... Making the most of Midi. Written by **AUI**'s music and programming ace, Paul Overaa, this volume explains what to buy, where to plug it in, how it works, and even how to program for it.

Bookmark Publishing is a sister company of Amiga developer HiSoft, and is under the guidance of ex-JAM magazine editor Jeff Walker. JAM, we are informed, has passed into the care of Larry Hickmott of Em DTP+ magazine.

Making the Most of Midi. £14.95.

Contact: Bookmark Publishing. The Old School, Greenfield, Bedford MK45 5DE Tel. 01525 713671

Falling short

After all the hype about Windows 95 it appears to have fallen short of its predicted market penetration. Research company Dataquest apparently predicted over 33 million copies of Windows 95 would be installed on systems by the end of 1995. It appears only 19 million actually made it.

In a similar overestimate some companies predicted that Microsoft's top-end operating system, Windows NT, would exceed the sales of IBM's

OS/2, but apparently NT has only managed sales of 1 million compared to IBM's recently triumphant announcement of 12 million OS/2 users.

Then there are the stories of thousands of copies of Windows 95 being returned to dealers in the US. Possibly because people are finding them just too complicated. Nothing is ever as easy as it seems in this wonderful Technoworld, certainly not predicting what will sell and what won't.

Gude evening, officer

Science Applications International, of Torrance in California, have come up with a new method for catching drink drivers. A laser beam is shone across a road at a height sufficient for it to pass through the side windows of passing cars. Opposite to the laser is a detector tuned to the absorption band of ethanol.

When a passing car has a drunk inside it, the alcohol in the air inside the car absorbs some of the light of the laser beam. A computer can then work out the amount of alcohol in the air, and interpolate the 'driver's' blood alcohol level.

Sounds good, but what if it is the passenger who is drunk and not the driver, or perhaps the driver uses a particular strong, cheap, aftershave, which is made from alcohol? As is sometimes the case, the scientists seem here to have come up with an impracticable solution to an easily solved problem. Maybe not so easily solved though, except by prohibition of alcohol and that was tried, without great success, in the USA before.

Burns of the Bytes

Poetry Now is on the lookout for computer users. They are compiling an anthology of poems on the 'World of Technology', and are looking for contributions of up to 30 lines. Up to two entries per person are allowed, and the closing date is April 30th. So get inspirational.

Selected entries will be printed in the forthcoming book, and you will get a royalty as well as your name in print. Entries should be accompanied by an S.A.E.

Contact: Poetry Now, The World of Technology, 1-2 Wainman Road, Woodston, Peterborough PE2 7BU

Gremlins

Due to an editorial mix-up, blame the Gremlins please, the Virtual Reality field report in the January 96 issue of *AUI*, and the Opinion column in the February 96 issue, were wrongly attributed to Michael Hanish, they were written by Phil Osborn.

We would like to apologise both to Michael Hanish, and to Phil Osborn - the true author, for this error. However, the photographs used in the Virtual Reality article were taken by Michael Hanish.

French Resistance

Public Sector unions in France have been leading protests in defence of traditional economic principles. They are unhappy with the changes which result from the information revolution and telecommunication liberalisation.

Officials try to respond by showing that there is more to be gained by embracing the information society than retreating from it. Sixty projects have been set up which are local in character, promoting activities in cities and regions by adapting information technology services to local requirements. The Eukiosks project, for example, provides city kiosks at which people can look up useful information.

Resistance to change, says Martin Bangemann, European Commissioner for Information Technology, stems from the fact that Europe lacks America's 'can do' mentality.

That may be true but there are also other factors. For example, Europe has evolved a society where employment has traditionally been somewhat more secure than the "Week's notice" culture of the USA. And Europe's history leads it to be less willing to make abrupt radical changes, particularly if those changes derive from technologies that may be only temporary.

The USA's lesser respect for established ways of doing things may come from their need to make everything afresh when opening up a new country.

From Little Acorns

Larry Ellison, boss of database company Oracle and the leader of the anti-Microsoft party, has plans to re-introduce the dumb terminal as recently reported in *AUI*. Now called 'Internet Appliances' these sub-\$500 (£300) machines are supposed to be going to allow consumers access to the wonderful world of multimedia and the Net. Now, the UK-based Acorn computer company has been selected to provide the hardware for the set-top box through its ARM RISC chip. The ARM RISC chip also powers Apple's still struggling handheld computer, Newton.

The reason that companies like Apple and Oracle favour the ARM chip is that its clever design make it a powerful chip, but that power does not need heavy support, as do most CPU's, in energy, so making it very economical to produce and use.

Acorn, once the UK's leading purveyor of computers, especially for education where they benefited from their link-up with the BBC which gave them the right to sell computers to schools under that brand, are now owned by the Italian electronics giant, Olivetti.

Acorn in turn own 43% of ARM which looks like a better investment for them than their fading flagship computer, the Archimedes.

Olivetti have suffered some disastrous losses from their computer business and their erstwhile successful international wheeler-dealer boss, Carlo Benedetti, has sold off some of his shares to raise cash so that Olivetti can get into... guess what... Yes, the wonderful world of multimedia and the Net, and possibly cooperation with Oracle. Perhaps not so much... from little acorns... as wheels within wheels or with wheeler dealers.

Off the Road

Guildhall Leisure have released Black Magic's Extreme Racing for A1200 (reviewed this issue) and CD32, priced at £29.99. The title, say Guildhall Leisure, features eight different cars, a multitude of tracks and a 'battle mode', which allows bad losers to kill off their opponents.

With the paucity of new games - or any software coming for the Amiga we need more Black Magic to help - and we don't mean the chocolates either.

A1200AV



Eyeteck have told *AUI* that they are now doing a special 'multimedia' upgrade for Amiga A1200s. The £230 package consists of a special 1.083Gb AV hard drive with a pre-installed copy of Optonica's Multimedia Experience (reviewed this issue), and more than forty other useful multimedia utilities from PD and shareware authors.

An AV drive is one that is espe-

cially designed to handle continuous playback of sound and video data without the 'jerkiness' inherent from ordinary hard drives. And this one, Eyeteck told *AUI*, is so slim that it can be fitted into an A1200 without any modifications to the case.

Contact: Eyeteck Group Ltd. The Old Bank, 12 West Green, Stokesley, North Yorkshire TS9 5BB Tel. 01642 713185

Sierra Goes Shopping

Sierra On-line has bought yet another company to add to its recent collection of Pixellite, Green Thumb Software, and Arion Software. US flight Sim firm SubLogic, with its twelve member development team, is the latest in Sierra's acquisition drive.

"For the first three quarters of 1995 retail sales of flight simulation products reached almost \$80 million," said Sierra On-line's chairman and CEO Ken Williams. "Through our combination with SubLogic we will be releasing a series of civilian aviation simulations that utilise our cutting edge Windows 95 based 3D terrain technology. I believe this new line of products will represent the first serious alternative to Microsoft's Flight Simulator, and a great complement to our successful military flight simulation business".

Now that statement has an ironic slant to it. For Microsoft's famed Flight Simulator, probably the biggest selling entertainment software the world has known in its brief computer era, was created by... yes, we're sure you knew, SubLogic.

Microsoft's Flight Sim was the same as the Amiga version that SubLogic brought out under their own brand name, or virtually so, because it was running on pretty rude old PCs at the time when the Amiga was a far superior machine. Microsoft bought the PC rights so that they could convince the then emerging PC world that the IBM compatible could do other things than spreadsheets and word processing.

The "Microsoft Flight Simulator" became a standard test for PC simulators to be able to run to show that they could really muster up all the supposed advantages of the PC on other computers. Commodore themselves, when they

were still in the appropriately named Babbage House in Maidenhead right back at the beginning of the Amiga's early period, proudly demonstrated the Sidecar, their hardware PC emulator, running the Flight Simulator - and it was being multitasked on the same screen with an Amiga program simultaneously. Wow! That was something the PC couldn't do for itself until about September 1995 - ten years or so later.

With the infinite benefit of hindsight, we can confidently point out that had CBM included the Sidecar or another and better emulator in the Amiga 1000 of the time, and perhaps bundled SubLogic product too, the whole course of computer, or at least Commodore computer, history would have been changed.

Meanwhile Sierra has announced its second quarter financial results. Sales for the quarter ending September 30th were \$31.8 million, a 63% increase on the \$19.5 million for the same period last year, while the firm made a profit of \$3.3 million compared to a loss last year of \$0.9 million. Although last year's figures include Sierra's share of losses from The Imagination Network which was later sold to AT&T.

For the six months ending September 30th, Sierra's sales increased 65% to \$53.2 million from \$32.3 million in the same period last year, while profit was \$3.3 million compared to a loss of \$0.5 million last year.

Sierra is now a \$100 million a year company... they used to put out just those interminable text based adventures. And SubLogic as an independent, and at one time highly successful, company is no more. Ah, nothing stays the same and there is, as it says on the cover of this **AUI**, no turning back, is there?

Doom & Gloom

Church leaders are reported to be outraged at the latest bout of advertisements proclaiming the message "Go to Hell" and "The Second Coming" as publicity for computer, or more likely, console games. The Daily Mail devoted half a page to the protestations, although differing schools of thought on the matter deduced that the story was either exposure about the recent shock ads from the games market, or a clever ploy by specialist consumer PR agency Mark Borkowsky to draw attention to the ads.

In case you missed any of the 700 site poster campaign, it was set up by Ocean for Doom on the SNES. The same company was also responsible for the bricks in the toilet ad that appeared recently for its EFL 2000 flight Sim. Virgin have also come in for

criticism but appear, from their public attitude, to be unrepentant.

For anyone who reads the computer entertainment trade paper, Computer Trade Weekly, these ads are quite familiar and almost expected as the games companies attempt frantically, hysterically it seems, to draw the attention of the Trade to their world-shaking product and obscure the feeble, unshocking competition.

One question that is sometimes asked is whether the computer games business attracts childish and possibly stupid minds, or whether involvement with the computer games business causes otherwise sensible people to become childish and possibly stupid. Answers please on both sides of a foolscap sheet to Ocean's advertising agency.

Artworks Design

Artworks, well-known for clip art software on the Amiga, is now offering custom design services for all computer users. This service was previously available only to printers, publishers, and companies.

Artworks in-house artists will produce either an original illustration or design to suit individual requirements on disk. They will also create computer images from designs supplied by the customer, or can reproduce on disk, club or company logos, school badges, or other designs.

All work can be supplied as bitmapped or fully scalable "no jaggies" vector images in full colour or black and white.

The completed artwork, Artworks told **AUI**, can be produced in a variety of formats (EPS, CDR, ProDraw, WMF, IFF, GIF, PCX, TIFF, JPEG) ready to be used with the art, DTP, word-processing or video program of the customer's choice on the Amiga, PC, or Acorn computers. Prices start from £20.

Contact: Artworks, 3 Pond Side, Wootton, Ulceby, South Humberside. DN39 6SF Tel. 01469 588138

Ultra Common

Don't computer companies ever talk to each other? Or is it that certain words creep into fashion and everyone just finds themselves using them? (It's about talking in terms of hopefully being cool and seriously in your face at this point in time!)

Sun Microsystems have launched a range of machines and called them - the Ultra 1 and 2 workstations. Ultra, does that ring a little bell? Maybe it should have been an alarm bell for Sun. Nintendo already

plan to have an Ultra on the market - the Ultra 64, which though promised for this Spring is thought more likely to arrive with Santa on his sleigh.

However, perhaps Sun might not really care for there should not be too much confusion for consumers with Sun's models retailing for mere £14,000. Can't imagine too many Dads and Mums shelling out that at Dixons for Wayne or Nicholas, Abigail or Victoria, can you?

Quotes of the Month

"Spectrum Holobyte should be singing my praises. I'm the fighter pilot. They wouldn't know an airplane if it bit 'em in the ass. What have they ever done except lose money?"

Wild Bill Stealey, Boss of Interactive Magic.

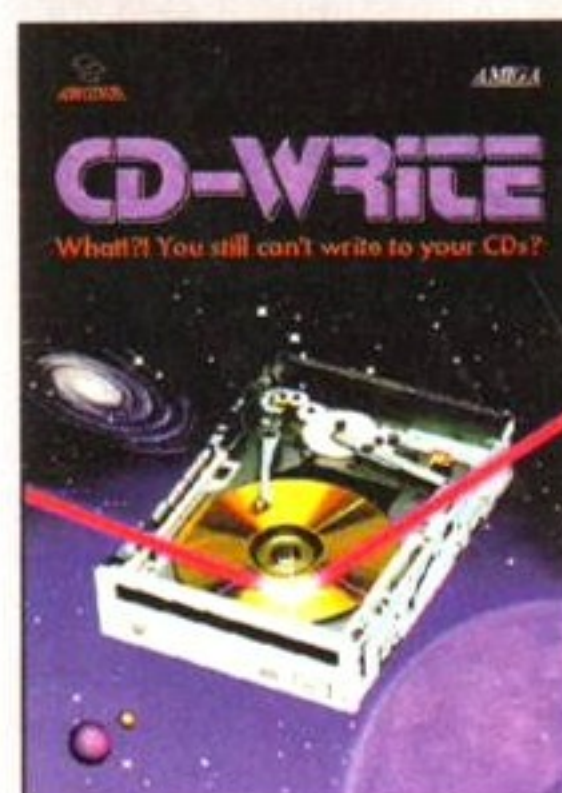
"Wild" Bill Stealey, as we commented recently is one of the genuine characters in the computer entertainment business and not at all like those moody photographs of putative programming stars who stand around on windswept roofs on grey days wearing shades and trying to look interesting. He was really a fighter pilot and well qualified to bring out the kind of flight sims in which his old company MicroProse specialised. He also clearly still carries his combative spirit forward as his comment on Spectrum Holobyte, who bought up MicroProse, shows.

One of the possibly less well-known facts about Spectrum Holobyte may be though that for some time after the late Robert Maxwell took an apparently unscheduled swim in the Med off his yacht, his son Kevin, recently acquitted of being involved in the financial disasters inherited from his paternal parent, worked out of the London office of the erstwhile Maxwell-owned Spectrum Holobyte as a Consultant to the company.

No wonder "Wild" Bill is somewhat scathing about SH's aeronautical expertise. Perhaps Spectrum Holobyte would be better dealing with yachting or financial simulations - and not too faithfully Mediterraneanally simulated one would hope.

The Workbench Add-On CD-ROM is the ideal companion to your workbench. On this CD you will not only find the best programs, that are available for the Amiga, but you will also get them ready-to-run from the CD. In addition to this there is an installer script that installs the desired programs to your harddisk.

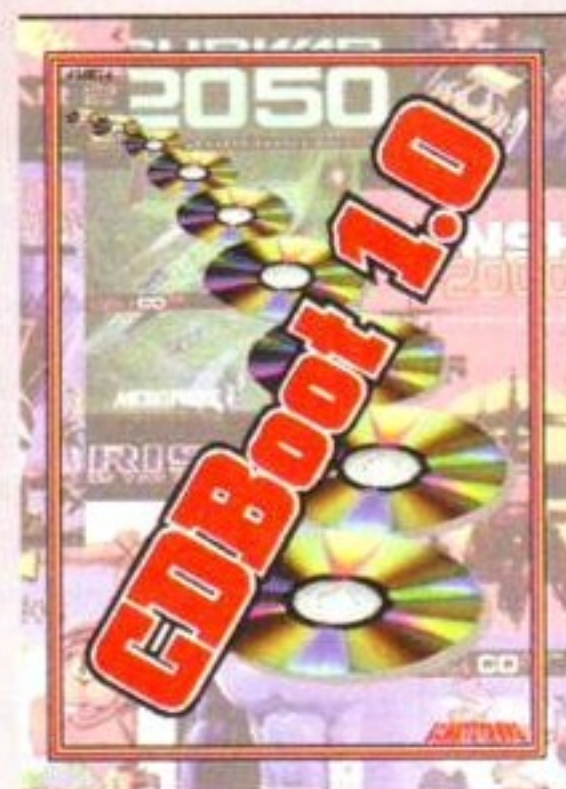
The CD covers all areas of interest, all, the programmer, the user, the creative and the gamer will find what they are looking for. On this CD-ROM there are many shareware programs, some of them at a special price, if you get registered. There is e.g. Shapeshifter for 40.-DM (instead of 50.-DM), in addition to this there is a 50 MB Mac partition, so that you can start playing around with Mac applications right away. Then there is PowerPlayer for 20.-DM (instead of 30.-DM), there are, of course, loads of modules with it, so that you can try it right away. AmiWin, the new X11-server for the Amiga is available for \$40, instead of \$50. You can save more than 100.-DM with this CD. Therefore you only have to send in the appropriate note in the booklet to the author of the program. **E24.95**



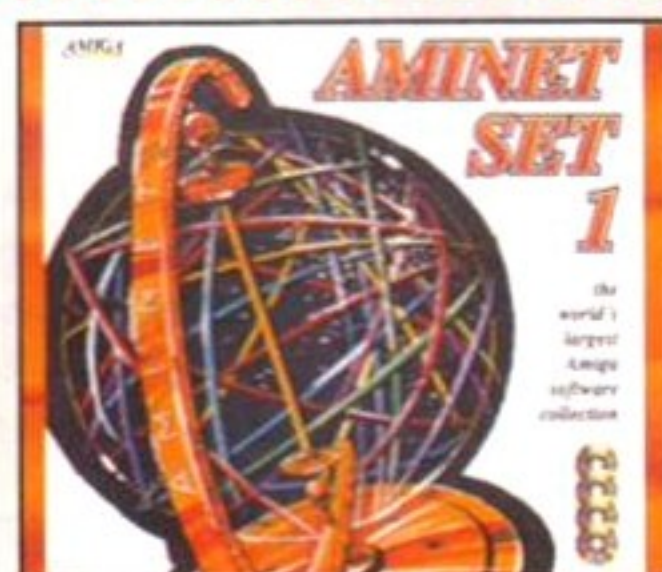
What?!! You still can't write to your CDs? CD-ROMs have long been an essential part of Amiga computing. Many users already own a CD-ROM drive, and the number of software packages available on CD is increasing steadily. Until now, though, it was not possible to write to CDs. We have solved this problem with our new revolutionary product: Ralph Babel and Stefan Ossowski's Schatztruhe are proud to present what can be considered a marvel of technology: CD-Write enables you to virtually write to CDs with an ordinary CD-ROM drive. From now on, you will be able to write, delete, and modify data on your CDs. This product will take you into a new era, and you will be able to utilize CD-ROM technology to its fullest. **\$44.95**



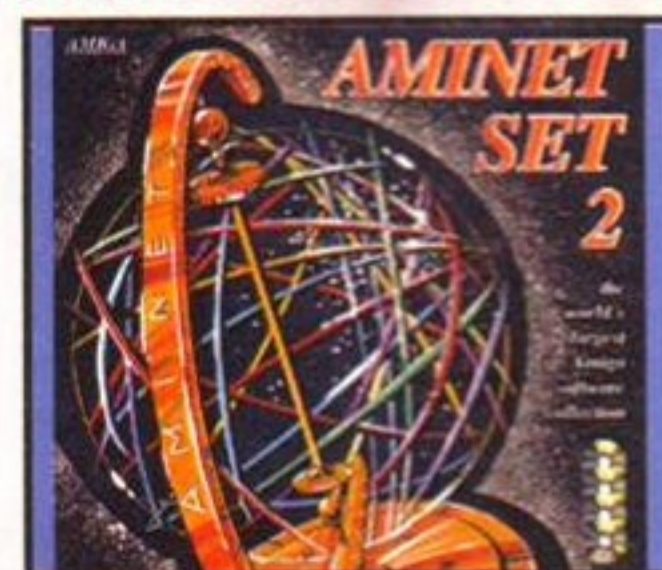
The FreshFish CD-ROM-series, produced directly by Fred Fish, provides Amiga users with hundreds of megabytes of the latest freely redistributable software. Published approximately every two months, each volume is a two CD set containing new submissions since the latest volume, as well as an ever growing selection of tools, libraries, documentation and other useful material that is updated with every release. **£17.95**



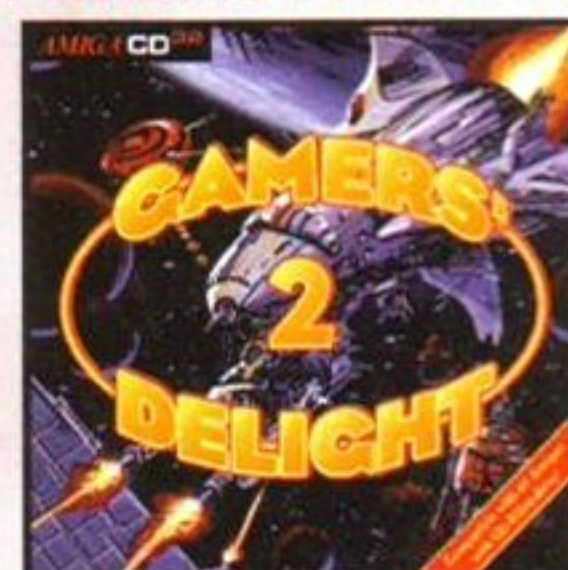
CDBoot is a fantastic new product that enables you to use almost any CD32 games on an A1200 or A4000 (with AT- or SCSI-CD-ROM drive and any filesystem). You can create a configuration file for each CD, containing information on the Joypad emulation. You can also save the highscore of each CD32 game. The usage and installation of CDBoot is very easy, also for beginners, due to the excellent English manual. Since the compatibility is very high, you can use 98% of CD32 games currently available. CDBoot is an excellent software solution for all Amigo-Freaks, who would like to enter the world of CD32 games! **C\$4.95**



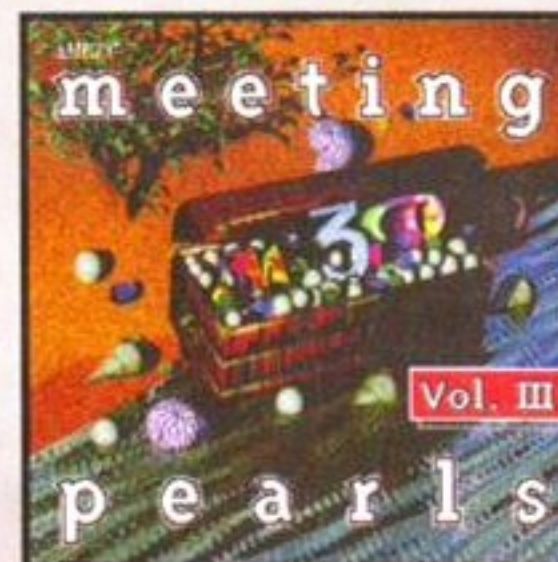
Aminet is the world's largest collection of freely distributable Amiga software. Up to 10,000 users access the vast archives every day and countless programmers publish directly via Aminet. Until recently access to Aminet was restricted to international network users. With Aminet Set 1, consisting of 4 CDs, the complete archive is published the first time. This CD-ROM-collection, which is dated January 1995, offers an almost inexhaustible reservoir of top-value Shareware. A wide variety of programs is included: Applications, Games, Demos, Pictures, Mods, Animations, Developer-Material, ... It contains approximately 4 gigabytes of software in 129,950 archives and you will enjoy the comfortable user-interface. **\$29.95**



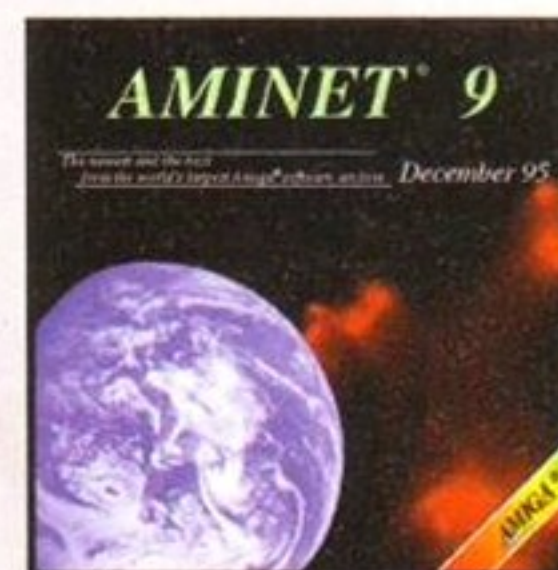
AMINET SET 2, dated November 1995, consists of approximately 4 gigabytes of software in 12,000 archives. Whether you like applications, games, communications or programming, the SET gives you all you need. Easy to use index files and search facilities make accessing it a pleasure. **£34.95**



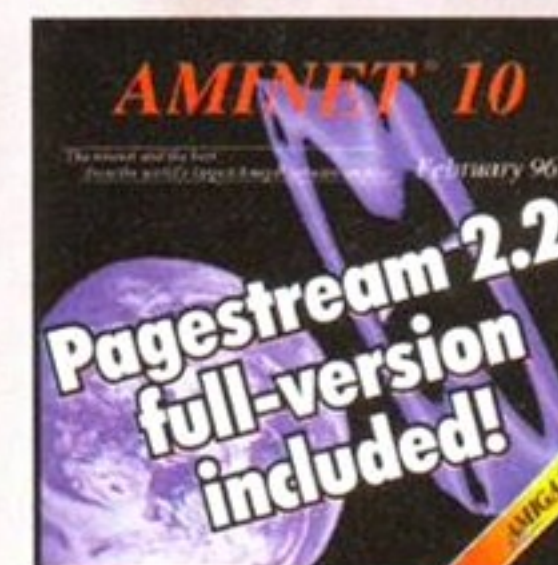
This CD contains 1070 games for the Commodore Amiga from different categories. Action, Jump & Run, Card Games, Puzzles, Strategy Games - a whole range of computer entertainment awaits! Games' Delight will hold you captivated for hours and guarantees long-lasting pleasure. 70 games are commercial versions - no public domain & 1 demo! This CD can be run on any Amiga with CD-ROM drive. 1 MB free memory and Jovastick/Jovpad. £26.95



The Meeting Pearls Volume III contains 650 MB of the finest FD software via a special user interface, which has been created to allow you to find the program of your choice with ease. The contents: 10 MB Packer, Cruncher, Archive Programs - 3 MB CD-ROM Utilities - 21 MB Communication and Network Programs - 5 MB Debugging Tools - 29 MB Development Tools - 13 MB Floppy, Hard Disk and SCSI Programs - 8 MB Educational Programs - 9 MB Games - 35 MB Graphics Programs - 39 MB Internet Movie Database, Updated Version - 7 MB MIDI Tools and Programs - 27 MB Mods - 12 MB Music Programs - 21 MB Pictures - 13 MB AmiTCP and more for Networking - 60 MB Documentation, CD-ROM Databases - etc. - 96 MB PostTeX 1.4 - not previous available on any CD-ROM - 15 MB Utilities - 30 MB HTML-Pages - Collections of datatypes, benchmark programs, icons, programs for amateur radio and electrical/electronic engineering are also included. **£9.95**



Still available! **£14.95**

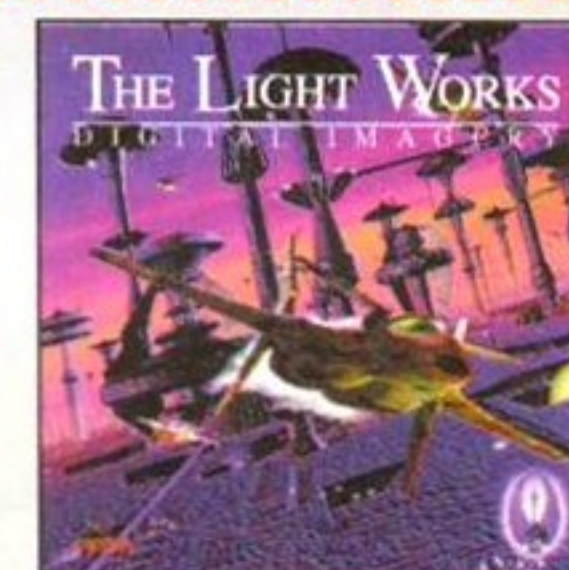


Aminet CD 10, dated February 1996, consists of approximately 1,1 gigabytes of software in 3600 archives. Since the release of Aminet CD 9 more than 500 MB new software has appeared. The current edition has a special focus on fonts, more than 1000 fonts from the internet were included. User friendly access software makes the Aminet CD 10 a pleasure to use. **£14.95**

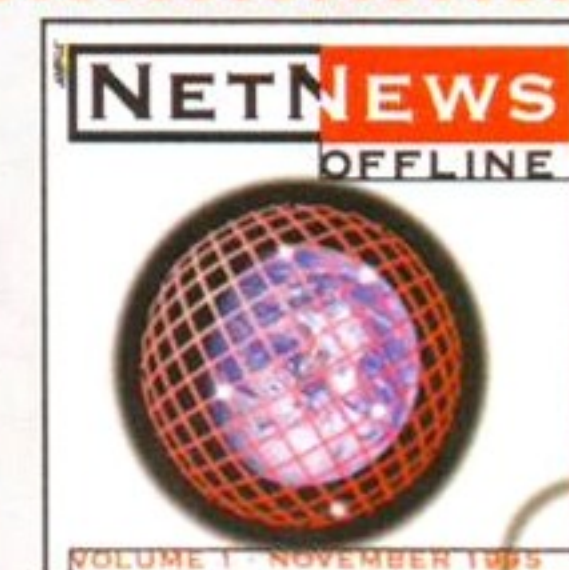


XiPaint is a leading edge, 24-bit paint program. It's suited to the demands of novice and expert alike, and within a short time, you too will be able to produce colourful and creative art in 16.8 million colours. This version of XiPaint provides a professional paint program at an unbeatable price/performance ratio.

Overview of Features: - Diverse point functions including colour, contrast and saturation adjustment - Mask, outline, recolour and fill functions - Airbrush with adjustable spray functions - Lightstable function for manipulating montages and animations - Text functions with anti-aliasing using Compugraphic fonts - Support for a variety of graphic formats - Unlimited Undo - Diverse manipulation of alpha channel - Supports many graphic cards - Layers to combine different projects - ARexx port - Drag & Drop colours - External filter module - Extensive documentation - 60 textures, 50 landscapes, 30 other pictures and many fonts included. **\$49.95**



Raytracing - A fascinating area of the computer graphics. Pictures from the computer, perfectly rendered, fascinate people all over the world. The Amiga was the first computer to be used for raytracing, and today it is still a leader, with many high quality programs. A real artist of raytracing is Tobias J. Richter from Cologne/Germany, whose detailed objects stun the people. Especially his space ships of famous science fiction films are used to demonstrate the capabilities of a raytracing program. The objects are highly detailed and extremely realistic due to the application of complex surface textures of the models. Until now it was difficult to acquire these objects in order to create one's own scenes or animations. **\$29.95**



NetNews Offline Vol. 1 is the first disk of a new bimonthly published series of Amiga CD-ROMs which contains all Amiga-related news-groups from the internet. Every volume features about 50,000 articles which contain hot rumours, important information about all aspects of the Amiga, press-releases, discussions and flame wars, ... A newsreader is included. NetNews Offline is the cheap alternative of getting in touch with Usenet. **£14.95**



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 Fax +49-6171-8302
 Email: Compuserve 100336.1245

Villain of the Year?

Proof that 1995 saw a dramatic change for the electronic games market was borne out by a recent poll carried out by Computer Trade Weekly that covered 1995. This poll showed that the No.1 in the popularity stakes was Sony's Playstation scoring 62%, second was PC CD-ROM at 20%, and third the Mega Drive with 12%. Fourth, believe it or not came the Amiga with a shameful 4%. Sega received an honourable mention with Gameboy and Saturn.

Meanwhile Amiga Technologies was joint 4th place with John Major and Nintendo in the Industry's "Villain of the Year" category. Top was Sega with 18%, Multiples' discounting second, and Bill Gates third (inspired by the fact "he's got too much money and too much power!"). Cracked Playstation cases scored a dishonourable mention!

Joint 4th place for "Villain of the Year"? There are those who would place AT somewhat higher than that.

Lousy and bugged

The Which "Guide to Computers" has reported poor software products and a lack of standards, and has blasted producers for selling packages riddled with bugs, for advertising features that do not work, and failing to rectify matters even when they are aware of the problems.

Wow! Where have Which? been living all this computer time? That's just normal practice in the turned on, tuned in, and bugged out computer world.

In addition to the sins listed above,

many computer retailers employ staff with little training who offer consumers incorrect advice. "Do you think that someone has been visiting some of those brown goods places that proudly display these strange boxes called computers?"

"If washing machines, cars, or video recorders went on the market with the same problems, the public outcry would be deafening," said Richard Wentke, author of the Consumer Association's Guide.

There is a public reluctance to complain about poor quality which has fuelled the market's unprofessionalism, the report said.

The trouble is not that the public is reluctant to complain, it's just that it's hard to find any software or even hardware that is really in perfect condition when it comes out. As someone said to **AUI** recently - and were they referring to a famous Microsoft product launched last year? - "Never buy Version 1.0 of anything electronic."

**1,300
a
week**

GfK Marketing Services have produced statistics showing that British homes are joining the information superhighway "with enthusiasm". Each week an estimated 1,300 households subscribe to the Internet with 200,000 expected to subscribe in the next year. Access to business information and e-mail were the two main uses cited by respondents.

Two hundred thousand in a year? That's less than one tenth of the numbers of PCs expected to be sold. Far fewer than attend football matches and minuscule compared to those who go to the cinema or fishing. Do you know what the UK's largest spectator sport is - Air Displays.

"Enthusiasm"? They have got to get to be much bigger numbers than that really to be considered a part of everyday life. Even the mobile phone is supposed to be used by just under 10% of the UK population and that comes out to something over 5 million. Now 5 million UK citizens using the Internet, that would be enthusiasm.

Digital Leaves Home

Digital, who when they were the world's second largest computer company in the mid-eighties called themselves DEC, are quitting the home market for computers to "refocus the retail side of its activities on business users".

The reason is that the fierce competition for the home market has cut profits to ribbons and Digital just can't go on selling computers at below cost. Yet it was only in 1994 that Digital re-entered the low end of the PC market and the US manufacturer's worldwide PC sales are estimated at around £1.4 billion in 1995.

If you can't make money even from that kind of turnover then the problems must be severe and not only confronting just Digital either.

Hiding to Nothing?

Escm could not be accused of failing to come up with ideas. The only problem is that they seem to be bad ones. Who for example came up with the TV/promotion ad showing a 40's type "private eye" character? It doesn't quite conjure up the image of the future, does it? More the past, out of date, behind the times, old fashioned, or so the opinion is in the computer industry generally.

Escom's latest brilliant idea which may prove even less popular is to charge software publishers £5000 to stock each software title in Escom stores and guarantee them a full facing. It doesn't seem to be exactly the sort of incentive necessary to stimulate the market, especially for Amiga software, which may be the reason why Amiga stuff is as rare as hen's teeth in the Escom chain of shops.

The move to charge for shelf space, it seems, has already scared publishers who describe it as a dangerous precedent which will

prompt other retailers to ask for the same fee. Dealers who have supported publishers' ranges under normal trading terms are now questioning their loyalty. The company's Game Operations Director, Paul Lloyd-Roach, thinks that Escom's demands can be viewed as an extension of the food retailing and software publishers established practice to contribute to promotions, catalogues, and special displays on end caps. The fee, he said, could be considered effective spending on an individual title.

One publisher said "I don't think shops are doing themselves a favour because they won't get a representative range of software. It might work on a £50 product but not on a £19 one. This is dangerous".

Microsoft's retail manager, Paul Tollet, said the company had not been approached. "We wouldn't pay for it. The market decides whether our products are right for retail or not."

Samsung Chips In

Samsung Electronics is claiming to be the first company in the world to complete the prototype circuit design for the newest generation of computer memory chip. Four other companies, including IBM and Motorola, have said that they are involved in developing similar chips, but Samsung says it has got there first.

Samsung's 1Gb synchronous Dynamic Random Access Memory chip (DRAM) is expected to become a key component in computers and multimedia systems because of its immense storage capacity, about 16 times that of current DRAMs.

Samples for computer companies are expected to appear at the beginning of 1997. A single chip 1Gb DRAM will be able to store up to 15 minutes of moving pictures, 16 hours of sound, 400 full colour still pictures, 8,000 newspaper pages, or 160 books. Now that is what we call storage.

And with hard drives of 1Gb plus costing not much more than £200, it would seem likely that with chips like Samsung's we will see prices fall and storage grow as an additional benefit all computers. One hard drive company boss told **AUI** that few drives are being produced today that work with the Amiga are less than 1Gb.

Quotes of the Month

"We don't mind at all if we're the last third party to leave 16-bit"
Paul Patterson, Deputy Managing Director, Ocean.

One of the surprises at the Christmas period last year was the consistent sale of Amiga software. 16-bit it may be, and struggling with the entry of the 32-bit machines including the vaunted 32 bitness of the CD32 itself, but there are plenty of still eager users out there who would love to do wondrous things with their machines if only someone would give them some hot software with which to do it. And there are lots of success stories built on "mature" markets.

Paul Patterson, a longtime and well-respected survivor of the many vicissitudes of the computer games world, could be pointing the way to the fact that though the "early adopters" rush to buy the latest device on the market, many more users hesitate for a long time before junking perfectly good machines just because fashion so dictates.

How many A500s are there still around and in agreeably usable condition?

Uncomfortable with rape

Beatties, the chain of stores better known for model railways than computer games, are refusing to stock Sierra's horror adventure game Phantasmagoria which features a sexual assault on a woman, following the real life rape and murder of 15 year old Naomi Smith.

"We're uncomfortable with rape and don't want to be seen condoning it" said buying director Arthur Smith. "Beatties is a family store and we can't

stock this kind of product when we've got women working and shopping here.

What is the fascination with this kind of violence that so seems to populate the TV and the computer games screens, with programmes largely coming from the USA and imitated in the UK and other countries? And why do Sierra, which is jointly owned by a woman, encourage the sale of products that depict it?

Stirring the Net

Sendai Interactive has expanded its on-line ventures by launching two sites featuring the latest Bond movie, GoldenEye. One of the sites is within the NUKE InterNETWORK, and one on the Microsoft Network. Both sites draw on the Official GoldenEye Collector's Magazine, the firm's licenced publication based on the latest James Bond adventure. The MSN go word is GoldenEye and the NUKE web address is <http://www.nuke.com/GoldenEye>.

The latest film has been a big box office success around the world, although those who have seen it say it is just 'more of the same'. Maybe it was because six years had passed since the previous Bond movie and the publicity was only second best to Windows 95.

Now it's on the Net. You just can't get away from that 007.

3DO price cut

Goldstar has reduced the price of its 3DO player to £199 to compete with Panasonic's recent price cut to the same level. "We wanted to support our machine by bundling extra software, but slipping release dates meant we had to cut the price instead", Goldstar's multimedia business consultant, ex-CBM manager Kieron Sumner said. The company's player is bundled with EA's Fifa game.

It is more likely due to the fact that Playstation is outselling 3DO than any other reason. More Sony machines have been sold in the last few months than Panasonic, and Goldstar, have shifted in the last two years.

And, with the latest news that Mitsubishi, Panasonic's parent company, have exclusive rights to the new 3DO M2 chip, we may see Goldstar dropping their support for the platform.

MegageM Supports Amiga

Longtime US developer MegageM has kept itself busy creating new products for the Amiga 4000. FlyerCOM, price \$295.00, features over 30 powerful NewTek Flyer ARexx commands with Goto Frame, play, jog, play pause, variable rate shuttle, and RS232 control. The Hardware RS232 Jog/Shuttle, wheel with VCR type controls is \$279.

FractalPro Image Library v1 CD-ROM, priced \$29.95, features spectacular FractalPro images with VistaPro demos as well. MegageM say the demos provide superb Amiga, Lightwave and Toaster image material.

FractalPro v6.10, price \$99.95, is an Amiga fractal package to make Lightwave objects. There is a bonus of FractalPro Image library CD free with FractalPro v6.10.

ScapeMaker v4.0, price \$49.95, converts 2D images to 3D objects. It combines and processes objects and saves in Vista Pro and Lightwave for-

mats. For an additional \$20 the package includes the FPILV1 CD.

VideoGem CD, price \$99.95, provides new Toaster effects, CG colorfonts and realworld landscape Lightwave objects. JobTracker 1.0, price \$59.95, tracks project billing time and charges.

RPaint 2.0 AGA, price \$69.95, provides paint, presentation, titling, and ARexx graphics for AGA. It's good to see that some of the more creative developers in the USA where most of the original, and possibly largely the best software came from, are still keeping the spirit of the Amiga alive there.

We know from the communications we receive that there are plenty of Amiga users left in the US and not only those using the Toaster and Lightwave. Keep up the good work, MegageM.

Contact: MegageM Digital Media
1903 Adria Avenue,
Santa Maria, CA 93454
Tel. 805 349 1104.

Courtesy of Gates

Bill Gates has promised £664,000 of royalties from his latest book for an awards programme to recognise excellence in the use of computer technology in European primary and secondary schools. The money will provide prizes for teachers developing innovative computer activities.

If you want a slice of the Gatesian literary cash for some brilliant innovation you have created for a school or college, contact: Jeremy Wolfe, European Computer Education Programme, The Road Ahead Foundation, 60 rue Victor Lefevrestraat, B-1040, Brussels, Belgium.

Balls Up On Bugs?

A bug has been discovered wired into the telephone line at the Northumberland home of Alistair Balls, chief executive of the Tyne and Wear Development Corporation. A police enquiry has been set up following the discovery of the device by British Telecom who initially were called about a fault on the line. The mini transmitter is believed to have been there for a few weeks, and would allow someone to listen to phone calls within a range of several hundred yards. The question is - why Tyne and Wear Development? Could this be a bugging balls up?

Blockbusting CD-ROMs

Blockbuster Video is set to diversify into CD-ROM at 100 of their stores. It is expected that this move will hasten the need for the UK games industry to decide just how it feels about the rental market for CD-ROMs. Blockbuster says it considers games rental as a viable means of supporting the industry. It currently stocks Playstation and Saturn nationally and wants to roll out PC CD-ROM titles which will be suitable for customers.

From the number of absolutely awful films, generally childish horror and badly made at that, which you see being returned when you are queuing to take out that rare 1949 all male cast Indian version of Anna Karenina, the average Blockbuster customer, not you of course, you are anything but average, would revel in some of the more ghastly computer games.

All that, anyway, may be on the way to a past sell by date. BT, as has been reported in these pages in a previous issue of AUI, is intent on setting up a service to provide games down the line to hungry players. Sega too is already offering such a service in the USA and now plans to do the same in the UK.

These "on demand" games services will clearly takeover from the Blockbuster-style rental of films, and even more so, probably quicken the end for rental of games. The rental business for entertainment is time limited, and doubtless Blockbuster is well aware of it.

DVD Day is Coming

One of the main difficulties in the new age of technology is the differing standards and formats produced by development firms. Last September a general agreement was reached for the high density CDs, and this has been followed by an agreement on the final details of the new VideoCD format.

The chosen name for the new format, DVD, was agreed by Toshiba, Matsushita, Sony, Philips, Time Warner, Pioneer, JVC, Hitachi, and Mitsubishi Electric. DVD technology promises important benefits for consumers, film, computer, and consumer electronics industries. The nine companies will now undertake discussions in an effort to develop a patent licencing programme.

The companies supporting DVD will propose and promote a wide range

of applications for the format. They will continue to develop the technology and work to position DVD discs as the ideal digital storage medium for the multimedia age.

Specifications have now been finalised for the DVD movie player and the ROM for computer applications. These specifications reflect the recommendations made by Hollywood studios and the computer industry. Specifications for music applications will be finalised after hearing opinions from the music industry.

DVD will, it is thought, be as big a change as the CD has been over vinyl. It is not just the amount of storage capacity that it will bring - variously estimated at between four and six gigabytes - but also the hugely increased use that will come when the public gets the DVD habit.

Cleaning Up On Computers

Ask the question "What do you use to clean your computer?" and the probable response is a blank look. For most people, the definition of a clean computer is one which hasn't had a cup of coffee spilled over the keyboard in the last twenty minutes. The closest most people come to caring for computers and other office equipment is to wipe the dust of the screen when it gets too thick to see through.

Two companies which supply specialist office products have joined forces to offer UK commercial customers a range of cleaning and care products for the office environment.

Ribbon Revival, a manufacturer of printer consumables, has teamed up with US company Falcon to form a sales team for Falcon's new European 'Office Care' product range. Office Care products are, they told AUI, designed to meet the cleaning and preventative maintenance needs of electronic equipment in business and home offices. They include cleaning kits for mice to fax machines, with compressed gas dusters, cleaners, wipes, swabs, and magic pads to keep ink jet printers clean.

It's time to clean up the dirty old TechnoWorld in which you live, don't you think?

Contact: Ribbon Revival. Caslon Court, Pitronnerie Road, St. Peter Port, Guernsey GY1 2RW Tel. 01481 729552.



No more dirty looks when you mention computers.

Queen of the Net



The late band Queen have rocked to number two on the Internet. The band's site, although only recently set up, has attracted over 250,000 visits and is the most popular entertainment site after the Playboy web page. A Mercurial rise?

More Bad Ads

The Advertising Standards Authority has waxed wroth at games companies for their use of so-called humour which can be both offensive and even shocking, as has been commented upon in these censorious pages of the NewsFile. But it's not just companies like Virgin, Ocean, and Sega that are arousing the ASA's ire. It recently upheld a complaint against Mac company, Mac & More, which ran an advertisement with the headline "Our prices are simply divine". Harmless? The ASA didn't think so because the ad featured a picture of a woman in a short skirt and fishnet stockings accepting money from a man in a car. The advertisement was adjudged "offensive and irrelevant to the product".

Perhaps Mac & More should have tried to interest Hugh Grant in buying a new - or possibly old and dirty - Mac.

Cash and Grab

Cashpoint machines in Finland that had been speeded up to cut queues are to be slowed down again. In some instances the hole in the wall dispensers reclaimed the customers' cash before they could grab it. You can't win in this TechnoWorld, can you?

Chinese Pirates Junked

A hefty bill has landed on the desk of Taile Electronic Technology of Beijing. The Chinese court ordered the company to pay \$1.56 million in compensation for pirating the copyright of a domestic competitor as well as ordering the company to halt production of unauthorised products and to publish an apology to Chengdu Maipu Electrical Equipment in national newspapers.

This is thought to be the highest amount awarded in a software copyright violation case in China. However, some estimates are that over 90% of all software in China is pirated, and until sterner measures are taken the huge potential of 1.1 billion population country will never be commercialised.

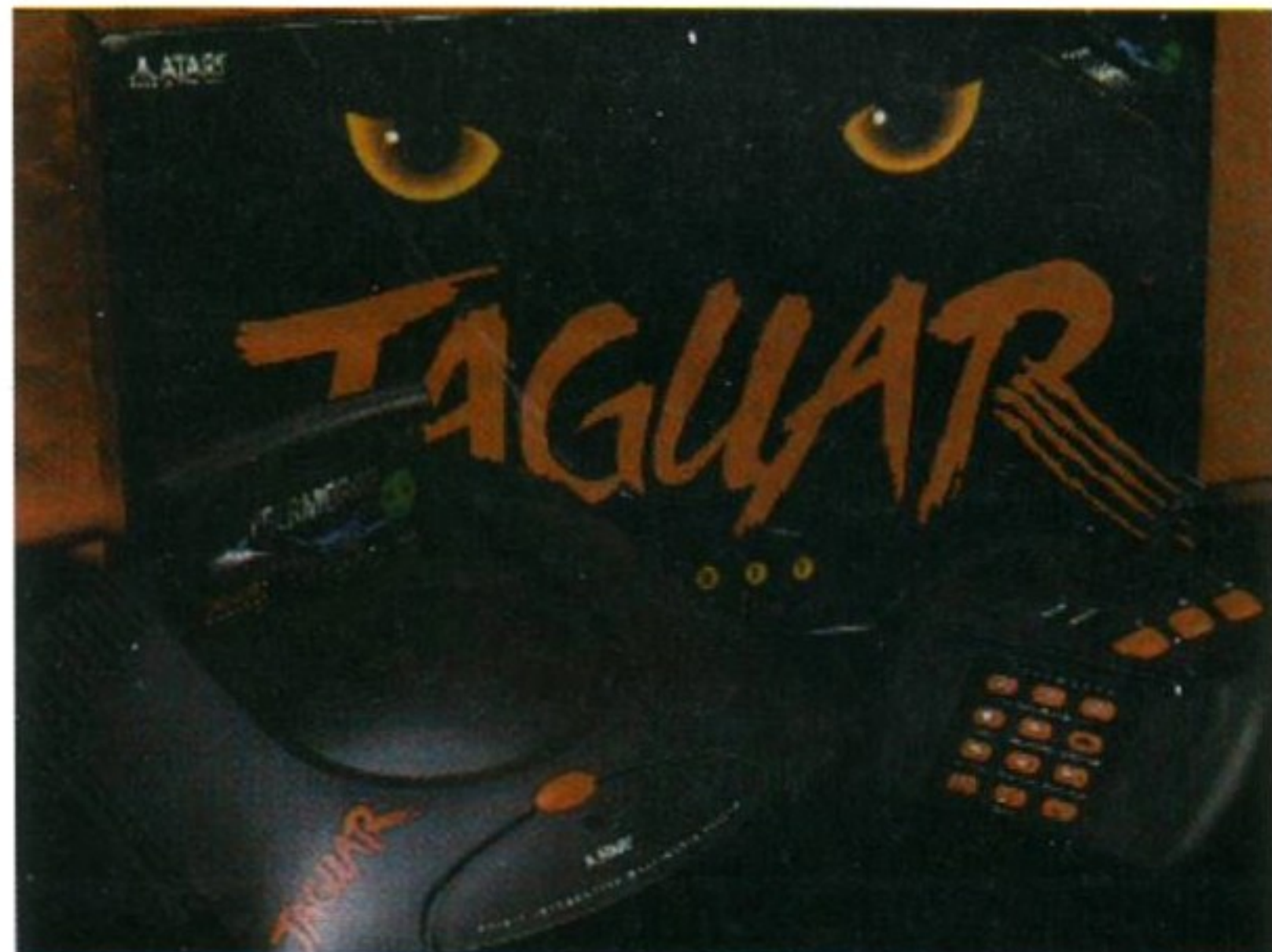
Of course, there are people, un-reconstructed old Maoists like those

who write in the final pages in this magazine, who probably think that's a great way to spread cheap computing. After all wasn't it Confucius who said "All property is theft and software ownership in China is even bigger theft."? Whatever that may mean.

There are rumours though that Electronic Arts are preparing a special dongelised Mandarin version of "The Gang of Four", a shoot 'em up based on an Enid Blyton novel that EA's UK MD David Gardner is said to believe will take China by storm. One of the biggest and bloodiest attractions is likely to be a level called "Tiannamun Square". The game is expected to hit Beijing right at the beginning of April.

"Pirates?" commented an EA high up, "Our dongle explodes if used within ten feet of a pirated copy of anything. We'll turn them into roast pork!"

Jaguars . . . A Threatened Species



If you are really desperate to add to your collection of out of date computers, there is a new one to put on your list - cheaply. The price for the Atari Jaguar, with a supposed market base of 200,000, is to be reduced from £149 to £99 from Easter.

Atari spokesperson Peter Walker said, "We believe the future of the console market will require a sub £100 price point, and would have done it earlier if we'd had decent software like Defender 2000 and Fight for Life to make the price reduction."

Oh really? £99? And this was the "64-bit wonder machine" that was going to be the champ of the "next generation"?

The Jaguar was ill-fated before it began. It was never going to challenge for the market that isn't even arrived yet - the new generation of games players with cash to spare. They are what is being called "KGOY" - Kids Getting Older Younger. These are the ever younger children who are drifting from outmoded consoles to PCs.

The Jaguar was an early victim of the KGOY syndrome. But to a large extent Atari dug its own grave with the introduction of a cartridge-based machine. Big mistake. Carts, too expensive and too restrictive, are yesterday's vehicles, no matter who wants to bring them back, Atari or even Nintendo.

Printers

Star LC240 24-pin colour	£159.99
Citizen ABC 24pin col	£150.00
Cannon BJ30	£199.99
HP Deskjet 600	£259.99
Cannon BJ4000C	£329.00

Eclipse Mouse

290 DPI
Microswitched buttons
ST/Amiga switchable
Free mouse mat
£7.99

Fusion Genlock

Phone for details
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**Amiga 1200 Magic
Pack £399.99**

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Our service department can repair Amigas in minimum time at competitive rates. All repairs go through our quotation service. We then report an exact cost for repair. Turn around is usually 4-5 working days but we can arrange same day service (subject to fault)

Quotation	£15
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Memory Upgrades

A500 512K
(Upgrades A500 to 1Mb RAM)
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A1200 4Mb
(Upgrades A1200 to 6Mb RAM)
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A1200 8Mb
(Upgrades A1200 to 10Mb RAM)
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2x 1MB SIMM's
Upgrades GVP HD8 +II Hard Drive to 2Mb RAM.
£39.99

4x 1MB SIMM's
Upgrades GVP HD8 +II Hard Drive to 4Mb RAM.
£79.98

2x 4MB SIMM's
Upgrades GVP HD8 +II Hard Drive to 8Mb RAM.
£279.99

Ladbroke Computing International are one of the longest established home computer dealers in the U.K. We have an extensive customer service policy which involves testing of all hardware prior to despatch to ensure that the goods arrive in working order. Offering free advice and support over the phone and keeping customers informed. Although our prices are not always the cheapest we do endeavour to offer consistently good service and backup.

All prices/specifications are correct at copy date 14/02/96 (whilst stock lasts), and are subject to change without prior notice.



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How to pay

You can order by mail, Cheque/Postal orders made payable to Ladbroke Computing. Or give your credit card details to one of our telesales staff.

Delivery

Postal Delivery is available on orders less than £40 (Normally £3 phone for details). For orders above the value of £40 add £7 for insured courier delivery. Saturday Delivery £20. All the above price are for mainland U.K.

All prices include VAT

Hard Drives

All Datapulse hard drives comes as complete boxed external units with a small footprint, 2 SCSI ports, internal power supply. compatible add on units for GVP HD8 + II or A600/A1200 via Squirrel Interface.

Datapulse Micra
532Mb **£200.00**

Datapulse Mica
1Gb **£300.00**

Squirrel SCSI Interface
A600/1200 **£64.99**

SCSI I Cable **£14.99**
Allows connection to VGP HD8 + II for A500(+)

Floppy Disk Drives

Amitek External Drive	£55.00
A500 Internal Drive	£39.00
A600/1200 Internal	£49.00

SCSI CD ROMS

Sony external CDROM with internal power supply and audio outputs.

Quad Speed SCSI CDROM **£249**

Squirrel SCSI Interface
A600/1200 **£64.99**

SCSI I Cable **£14.99**
Allows connection to GVP HD8 + II for A500(+)

Amplified Speakers

Soundwave 30
(25 Watts) **£24.99**

Soundwave 240
(120 Watts) **£49.99**

Monitor's

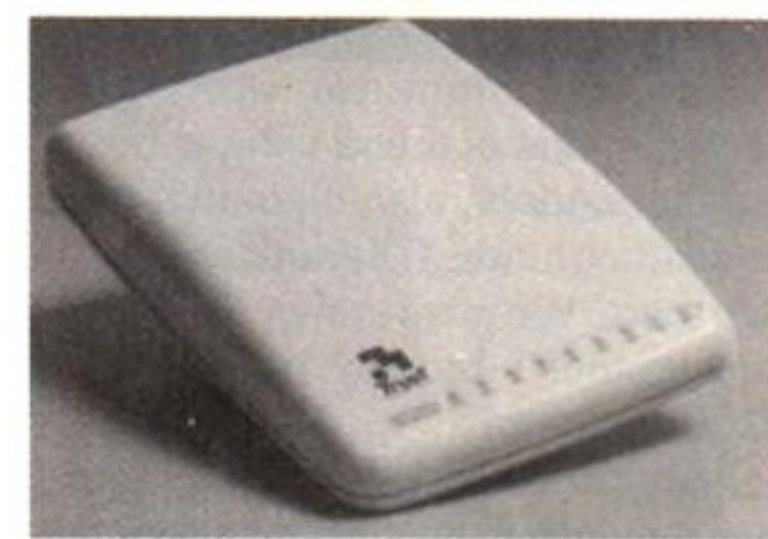


Amiga M1438S Multisync **£299.99**

14", 0.28 dot pitch ultisync monitor with built in speakers. compatible with A500/600/1200.

OEM 17" SVGA Monitor **£454.73**
.28 dot pitch. Non-Interlaced, MPR2

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Break into the communications revolution with the Communicator high speed range of modems. Log on to commercial bulletin board services, contact hardware vendors BBS's for online support or surf the Internet.

14,400 Baud External Fax / Modem **£99.99**
Fully BT Approved, includes all cables and 1 year warranty.

28,800 Baud External Fax / Modem **£169.99**
Fully BT Approved, includes all cables and 1 year warranty.

Escom Loses £20 Million

Escom has warned of a 1995 loss in the region of DM45 million (about £20m) attributed to setting up the UK operation and heavy competition in the last quarter of 1995. It is estimated that the company has sold 18,000 machines a month in the UK.

"Q3 was better than Q4 for Escom", said Rana Mainee, an analyst at research firm Inteco, "In Q4 it's a different type of consumer buying a PC, the sort that goes to Dixons or John Lewis."

Now what kind of consumer is that, when Dixons is generally just across the street from Escom? Probably Escom are asking the same question. Odd though that no mention was made of the Amiga in the results which don't look too healthy. It would be more encouraging if the loss had been caused by Escom pouring loads of investment cash into developing and marketing our favourite computer. Sadly, but unsurprisingly, it seems that the losses have come from PCs and the shops.

And then there were two...

Maybe as a result of realities to be faced because of their losses, Escom have taken the scalpel, even the sword, to what once was a strong company. We are referring to the remains of Commodore UK which became, in a reduced form, Amiga Technologies UK. Now the reduced form has been reduced almost to nothing.

Amiga Technologies has been cut back to just two UK staff after, Escom claim, suffering poor Christmas sales due, they say, to its main distributor SDL's financial trouble. Escom claims it lost six weeks of trading time.

General manager Jonathon Anderson, one of those to have been made redundant, also blamed a lack of marketing funds. "The support hasn't been there. We were told by Germany there wouldn't be any money until after Christmas."

Sounds like there isn't much money before Easter either. General

sales manager John Smith, who is staying on, agreed saying "We missed Christmas, but things are starting to happen now."

Amiga Technologies was set up in Maidenhead, though not in the old CBM UK headquarters. Now John Smith is relocating to Stansted to share office space with parent Escom. AT shouldn't take up too much space from the sound of things.

Amiga Technologies may be virtually no more, but Escom continue to grow in PCs. The current chain of 225 Escom outlets is, so the company says, set to become 250 by the end of the year, starting with the announcement that one store will open in Manchester and another in Cambridge.

If Escom put their mind to it, couldn't they get their shops to sell, say, two Amigas a day each? Then they would shift 150,000 Amigas in a year. That would get the market going.

Germany Lags

Adi Boiko, the boss of German software distributor, Bonico, has said that the CD-ROM edutainment market will achieve major growth this year, but that Germany will take time to catch up with the booming market in the US and UK.

"I believe very much in the edutainment market, but the German consumers need to get used to the idea of letting their children learn at the computer", he said. "It's not that there isn't enough product, it's more of a philosophical point. In fact, if more and more titles are brought into the market they won't even find space on the shelves".

Boiko believes that edutainment currently makes up only around five per cent of the total home CD-ROM market. The full priced game sector is believed to be worth around DM450-DM500 million - some £250 million - in Germany, substantially less than in the UK.

Ghostly Piracy

ELSPA - the games industry's trade association - declared pirate enemy number one was Ghost, who is believed to be the same person as Mr. Big, the computer underworld originator of the UK's best selling series of pirate software CD-ROM compilations. "Mr. Big" - modest name that - was arrested by West Yorkshire police before Christmas in raids said to have netted £25 million of illegal software. Ghost is alleged to have produced more than 100 CDs in his pirate series, each containing the latest PC software titles.

Faster Bytes for Apple

While Apple are suffering nasty losses due to their mistimed and possibly mismanaged entry into the low price market, they still have vision and speed. They are funding a project by microprocessor manufacturer Exponential in order to support them to enter the PowerPC chip market in 1997. The Exponential chip is claimed to offer CPU speeds at least three times as fast as current PowerPC processors with the first chip operating at around 300MHz. Yes, that's not a misprint, 300MHz. And others are said to be even faster.

Exponential employs bipolar logic gates in its design, rather than the CMOS technology used by IBM and Motorola. Bipolar logic is an older technology found mainly in mainframe computers. Exponential have developed the BiCMOS CPU chip in a way, they claim, which will overcome problems of high power consumption. Future Power Macs are expected to use the Exponential chip technology in prototypes from next year.

300MHz? It's beyond belief - or it would be if technological progress didn't move so quickly that almost anything is believable.

Non-Violent Germans

Two of the biggest games launched recently have had their German release cancelled due to fears over violent game content. Killer Instinct, on SNES and the Playstation, and 16-bit versions of Mortal Kombat 3 will not be released officially in the country. A country with a conscience and showing a sensible lead to the rest of the world perhaps?

Bad Ads

Driving around the streets of London, one cannot help but have one's attention drawn to large ads on hoardings, many of which these days give very few clues as to what they are advertising. The same is true for those ads which spill out of what seems like every page of magazines, not to mention those on the TV. You might like to ask yourself which ads you actually remember and why.

Games firms seem hell bent on outdoing each other to produce revolting exposures to get their message across. Many complaints have been received by the advertising standards authority, so our advice is to boycott the products that so offend.

It is a pity that the UK cannot follow Germany's example in banning the ads if not the games.

AUI gives first place to Virgin's latest marketing campaign for Earthworm Jim 2 cartridges which not only boast naughty slogans, but will also see posters splashed around sundry pub urinals. "Play with it long enough and you'll go blind". This, you might think, would be enough to put anyone off buying the game. Well, perhaps not, when you think about the kind of player it is like to get on the Nintendo *et al*.

In second place; "Destruction Derby - Love thy neighbour, wreck his car" depicts the stereotypical model posing on the bonnet of a clapped out

stock car. It is yawningly supposed to play on 'everyone's' desire to smash up cars and drive around racing tracks the wrong way.

Lastly, in third place, Kick Ass. "It's the ultimate game for unleashing all your pent-up aggression". Goody. Does this mean it is the 'last' game, as surely that is what the Editor insists "ultimate" means? As the Editor's favourite psychiatric nurse tells him, "try using finger paint on wax paper instead if you have pent up aggression, it's a way of releasing excess emotion. Beats kicking ass any time." Or does she mean "beating ass gives kicks any time?" (What's the betting that some games company picks that up as a slogan soon?)

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DVD players are believed likely to appear by the end of the year at about £500. It is thought that one reason that Matsushita bought out Trip Hawkins' 3D0 hardware technology, paying some \$100 million, was because the M2, in the next version of 3D0, is or will be DVD compatible, so giving it a low price entry into this coming new technology.

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The London Computer Show

Precision Events are hosting the London Computer Show, which will combine Virtual World 96, MacShopper Show, and Internet Live. It will take place at the Wembley Exhibition Centre from 17 - 19 May 1996.

Within the London Computer Show the multi-format Entertainment Zone will include Amiga, PC, Sony, Nintendo, 3DO, and Philips CD-i. With sixteen special feature areas including Amiga/Atari/PC advice centres, the first ever upgrade village where visitors can bring their computers to the event, and a test area for hardware and computer game software, there will be a chance for enthusiasts to purchase all formats computer hardware and software at special show prices from over 200 exhibitors.

In addition, the first computer

Internet show will bring the Web on-line offering first time users hands-on surfing while providing the more seasoned pro with the opportunity to sample the latest developments.

Virtual World 96 includes some of the leading virtual hardware manufacturers and programmers demonstrating the new technologies for both home entertainment and business.

The shows, which are expected to attract over 30,000 visitors, will be holding several competitions including Computer Addicts, and even one world record attempt on the Internet. Entry to one of the shows offers free access to all areas.

Contact: Precision Events.
220 Ellerdine Road, Hounslow,
Middlesex TW3 2PX
Tel. 0181 568 8374

Single currency warning

The debate about a single currency has centred, in this country at least around the pro-nationalists fears. However, a report by Hoskyns, the UK arm of the Cap Gemini Sogeti computer services group, adds a new dimension. They are warning that shortages of computer specialists could make it difficult for banks to handle the switch to a single currency and increase banks' demands for outside information technology help by 15%. But if that demand is concentrated in the last year before the new currency comes into use, the supply of skilled computer specialists could be stretched.

Hoskyns warns that the strain on IT will be compounded by the need to convert computer systems to cope with dates in the new millennium since many software applications now refer to years by only two digits.

Organa

A new media publishing company specializing in CD-ROM and on-line interactive fiction, as well as games for adults and children, has been set up. The company claims to publish "compelling content that encompasses both fun and learning, intellect and entertainment, and challenging and inquisitive titles for the arts and culture." A catalogue of their titles is available.

P.A.W.S. is one such CD based on the international prize winning children's book, How Dogs Really Work, by Alan Snow. There are three main sections, navigation, aerodogs, and anatomy. The navigation allows one to wander out of the kennel in search of bones and adventure. You get a 3D dog's eye view of the world from the dog's house, out into the garden and into the street. Sounds familiar? Being in the dog house we mean!

Contact: Organa Headquarters,
105 Reade Street #2E,
New York, NY 10013
Tel. 212 233 5161

In the palm of your hand

You will probably be aware of the growing number of hand-held electronic devices, some of which have been featured in *AUI* TechnoWorld pages, and some of you may own at least one of them. Credit card sized calculators were the first to be developed and used, followed by spell checkers and dictionaries. Small catalogues given free through the post or with newspaper supplements feature a number of such electronic devices like translators for French, German, and so on. Word finders for Scrabble buffs, Crossword Puzzle solvers, and Thesauri.

The Frankfurt Book Fair last year included a number of these palm sized machines showing how they have diversified recently. Now you can get the Horoscope Guide, Movie Views, Bartender's Guide, Diet and Nutrition

Guide, Parent's Emergency Medical Guide - Hold on, Wayne, I'll get out my electronic guide and check up on what I should do about your broken leg! - and even Betty Crocker's Cookbook.

Franklin, who produce these little wonders, claim to be leaders in electronic publishing. The company designs, develops, and manufactures all of the products which are sold in over 70 countries. The 100 titles in their Bookman range (launched in 1995) which enables integral electronic data to be augmented with additional titles on insertable ROM cards, are detailed in their catalogue.

Contact: Franklin Electronic Publishers UK Ltd. 7 Windmill Business Village, Brooklands Close, Sunbury, Middlesex TW16 7DY Tel. 01932 770185

Golden Dongle at Rainbow's End

The dongle is a bore and a trouble. It gets lost and bent and you can't find it when you want it, and so the damned software won't run. Yes, all of that may be true, but the astonishing, to simple honest folk like you and us, amount of piracy that goes on does demand some protection for software developers against that skull and cross bones crew who flood the world with their clever fakes. It was said that, in its heyday, the Amiga had an appalling record of ten pirate copies being distributed to any one genuine piece of software.

There are companies who offer software creators more security by developing the damned dongles, and to their credit, try to make them a little more user-friendly than those of the past.

The Sentinel family of hardware keys developed by Rainbow Technologies was, they told *AUI*, designed to provide software developers a solid solution for controlling distribution, securing products, and making sure that they actually get the cash from their products and some pirate doesn't. Rainbow have developed a sophisticated range of dongle-style protectors which they believe can cover all usual requirements.

The Sentinel Pro is an algorithm-based hardware key utilizing Rainbow's proprietary ASIC (Application Specific Integrated Circuit) technology. Every developer using SentinelPro receives a unique algorithm. All future keys ordered by the developer have the same algorithm so no special programming is required and no other keys will work with the application.

The SentinelSuperPro is a software protection device that combines multiple algorithms and read/write memory in one key. There is a wide variety of protection options such as distribution control, secure demo packages, software leasing, protecting multiple/modular applications, remote software updating and upgrading and prevention of piracy. It is claimed to be the smallest protection key at 1.65" long.

Lightwave one of the few products on the Amiga that still uses a dongle is NewTek's famed Lightwave, and at around the £650 mark, for the average user not exactly cheap. However, with a product at that price level, it's not surprising that NewTek would want to protect their investment with a dongle. They go, we are informed, even to the extent of sending the packages containing the software on a different delivery to their distributors to the pack containing the same number of dongles.

Of course, that can cause trouble as, we have heard recently, when the software arrived but the dongles didn't. Loads of quite useless LightWaves, hanging around waiting for their dongle connection. A familiar story. The same happened to us when that damned thing went missing after the cleaning woman tidied up!

If you are a developer want to know more about the latest dongle devices, Rainbow will be happy to tell you.

Contact: Rainbow Technologies Inc. 50 Technology Drive, Irvine, CA. 92718 USA. Tel. 714 450 7300.

FAST raids

The Federation against Software Theft (FAST) has announced the seizure of over £7 million of counterfeit computer software in a series of weekend raids. The raids, part of a nationwide campaign by FAST and the police, stretched from Doncaster to the West Country. Illegal CD duplication rings in the UK are thought to supply over 90% of the 'gold' CDs in existence.

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Multimedia Experience

Optonica have released an authoring package to suit the shallow pocket. David Ward test drives the software for the benefit of those who missed it when you were able to 'experience' MME on AUI's December SuperDisk.

You have to admire Optonica, a small company in Lutworth, for their perseverance in the niche Amiga market. Many a larger concern, with a smaller product range, would have defected to the PC camp long ago.

Happily, they have not succumbed to this temptation, and we Amiga users have benefited from their efforts in the multimedia field for some time.

Optonica supported the ill-fated CDTV and CD32 with a variety of educational discs - the Insight series, all put together with their Interplay software.

Unfortunately, Interplay was one of those horrendously expensive programs that made one-man band developers think twice before taking the CD-ROM project path. So few discs were seen from such independent sources.

With the release of Multimedia Experience Pro, this has all changed. A number of exciting projects are either entering development or are almost nearing completion.

With the penetration of CD-ROM drives into the Amiga scene, more people wish to take advantage of the medium with the massive storage capacity.

Since we cannot use the Microsoft Encarta's of this world, we will have to rely on those brave souls, the third-party developers, to create similar items.

Now, the home user can also join the multimedia revolution with a special, reduced feature, version of MME Pro.

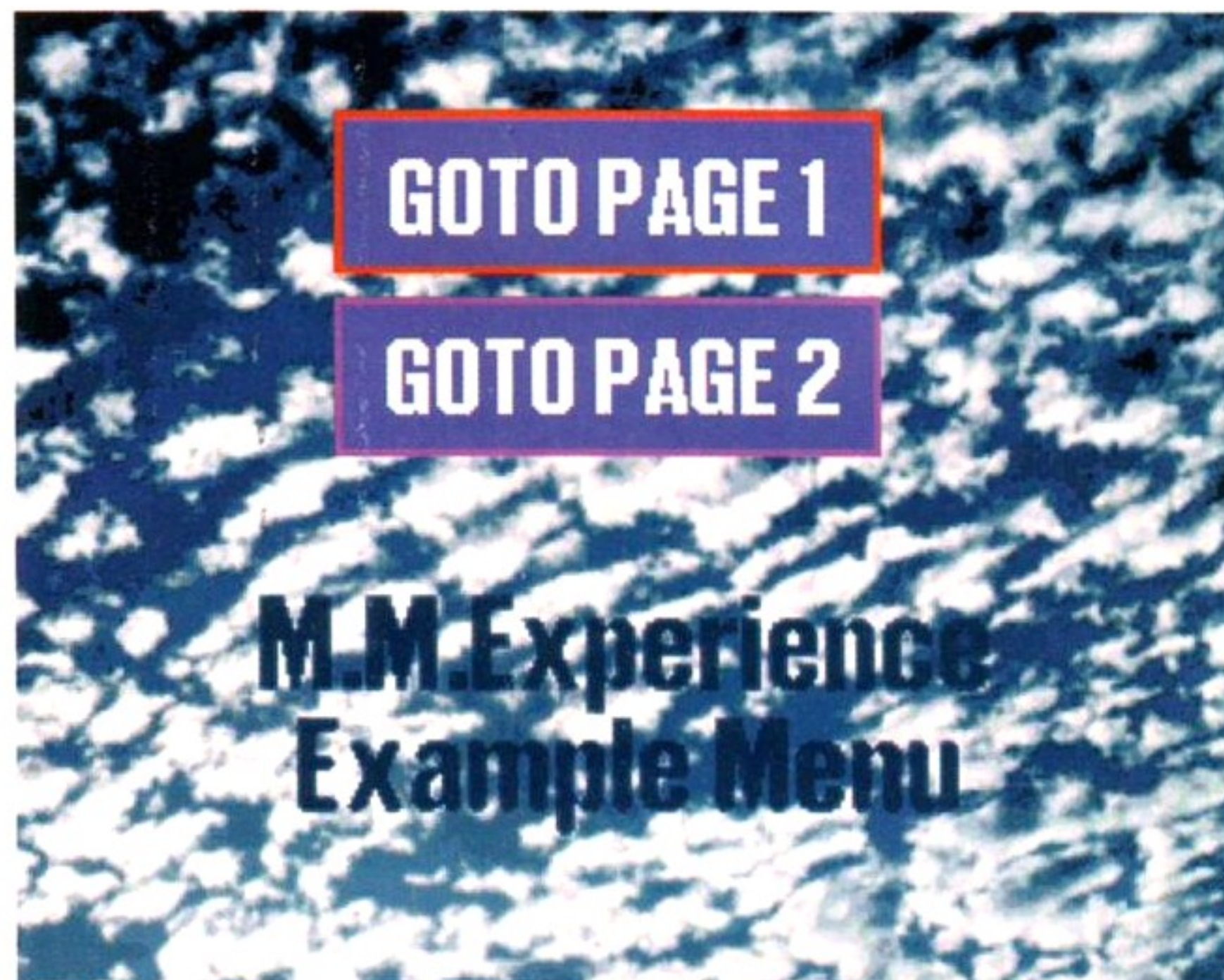
MM Experience

First, I had better explain the differences between this and the Pro version. With MME Pro you can author for CD as it gives you the facilities to control CDTV and CD32, the software to build an image of a disc so that it is ready for CD-ROM duplication, MPEG and CD audio support, plus a number of extra items like animated menus, hypertext, and project management and scripting.

The junior version is really designed for the creation of projects that are to be distributed on magnetic based media. Consequently the above extra features are not required.

Here's one I prepared earlier

MME is very easy to use. There are no 'lists of commands' to be typed in as if we were using a script, instead it uses a simple 'point & click' interface that allows us to build a multimedia project.



How buttons appear on a finished page. The page itself is an invisible box that holds the clouds image, while the buttons themselves are boxes containing their images.

The concept behind this is very similar to desktop publishing, a multimedia project is built from pages which have boxes on them.

Just as in a book, a page can contain text and/or pictures. Yet unlike a book, a multimedia page can also convey sound and moving images. First, a page needs to be created, and then the boxes for our intended items placed upon it.

These can be in any size or position you wish, even invisible. Into these boxes are placed the things you want to appear. Text is easily 'pasted' in, while still images will be shown full-size if that box selected - a scaled image being depicted within the box to give you an idea of what it contains.

Animations are presented in a similar way, but there is the possibility of adding sound to them by using a 'media clip'. Once a box

has been created for this purpose, you are presented with the media clip options.

Media Clips

Here you are given the option of loading an image or animation and adding the audio - narrative, music, or sound samples - to be played back at specific points.

Alternatively, the user could be sent to another page within the project, or even presented with an externally launched program like a word processor for instance.

Media Clips are the powerhouse behind MME. They are extremely versatile and, when linked together, can build a seemingly large project from a small number of ingredients.



The main control panel is where all of MME's functions can be accessed from.

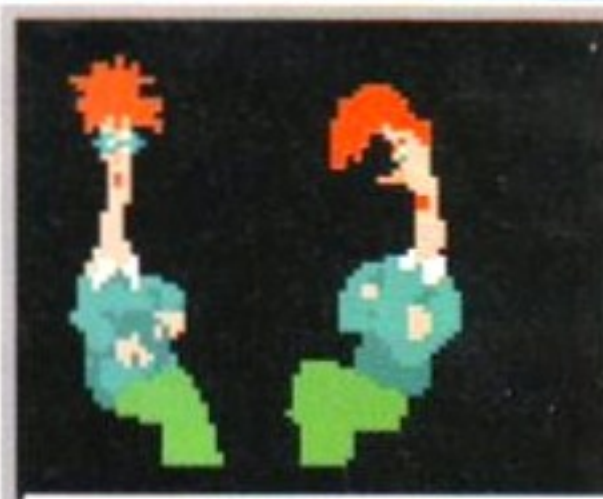


By choosing to create a box, you can select its style and whether it is for text, a still image, or for a media clip.



Media clips allow the playback of IFF animations in conjunction with music mods or sound samples.

SPECIAL OFFER – This demonstration version of M.M.Experience has been brought to you by Amiga User International magazine in association with Optonica Ltd. As a user of this demo version are entitled to a discount when ordering the full version. Instead of £39.95 you pay only £29.95 inc VAT and post and packing. Upon payment you will receive the full M.M.Experience package including full manuals and extras



A complete page with scrollable text, miniature picture representing the full image of a car if clicked on, and in the other box the first frame of the anim that would be launched if that was clicked on instead.

Project Preparation

By far the most important detail in building a multimedia project is to create an idea of what you want

to do on paper first. This is the 'concept' stage where you work out which pages are linked together, and what happens when particular boxes on your pages are activated.

You just can't jump straight in and build an 'experience'. Not only

will you end up in a muddle, but you will quite likely find that the particular sound effect you wanted to use is not on your hard disk.

Never start a job unless you have all the tools you need to hand, and any parts or bits that are required to finish the job available. Otherwise you may find your project proceeding in fits and starts with the possibility of it never being finished at all.

Publishing

Unlike the special version we gave away on a recent SuperDisk, MME comes with a freely distributable player program.

When a project is created, MME automatically saves any changes you make to your project as you proceed. Consequently there is no 'save' button as such. Even when quitting from the program the software will save all the work you have done.

The 'publish' option will create a disk (or set of disks) that contains all the bits that go to make up your project, along with the special play-

er that allows you to distribute your masterpiece to friends and relatives.

Users of our SuperDisk version were simply allowed to playback their project from within MME.

Requirements

Although designed for the playback of projects on machines with limited memory, MME ideally requires a hard disk equipped system for the creation of such projects in the first place.

The recommended set-up is an Amiga A4000 with 8Mb of RAM and a 1Gb hard drive, but I know that you can get away with a lot less than that (minimum 2Mb of RAM), especially on a small projects.

Lastly, it is important to point out that MME is designed to run on any Amiga. Yes, even 1.3 users are catered for.

Conclusion

There are a fair number of multimedia type authoring utilities that run on the Amiga. Some are no longer in production, some are difficult to use, and others do not have enough facilities within them.

MME more than fulfils the requirements of the home Amiga multimedia 'producer' in a simple, and very easy to use, way. It is also a British product, and that means support is available at reasonable times and telephone costs.

I know what it is like having to call the west coast of the USA or Germany for answers to a trivial matter. **AUI**

INFO

Overall Rating 93%

MME £39.95

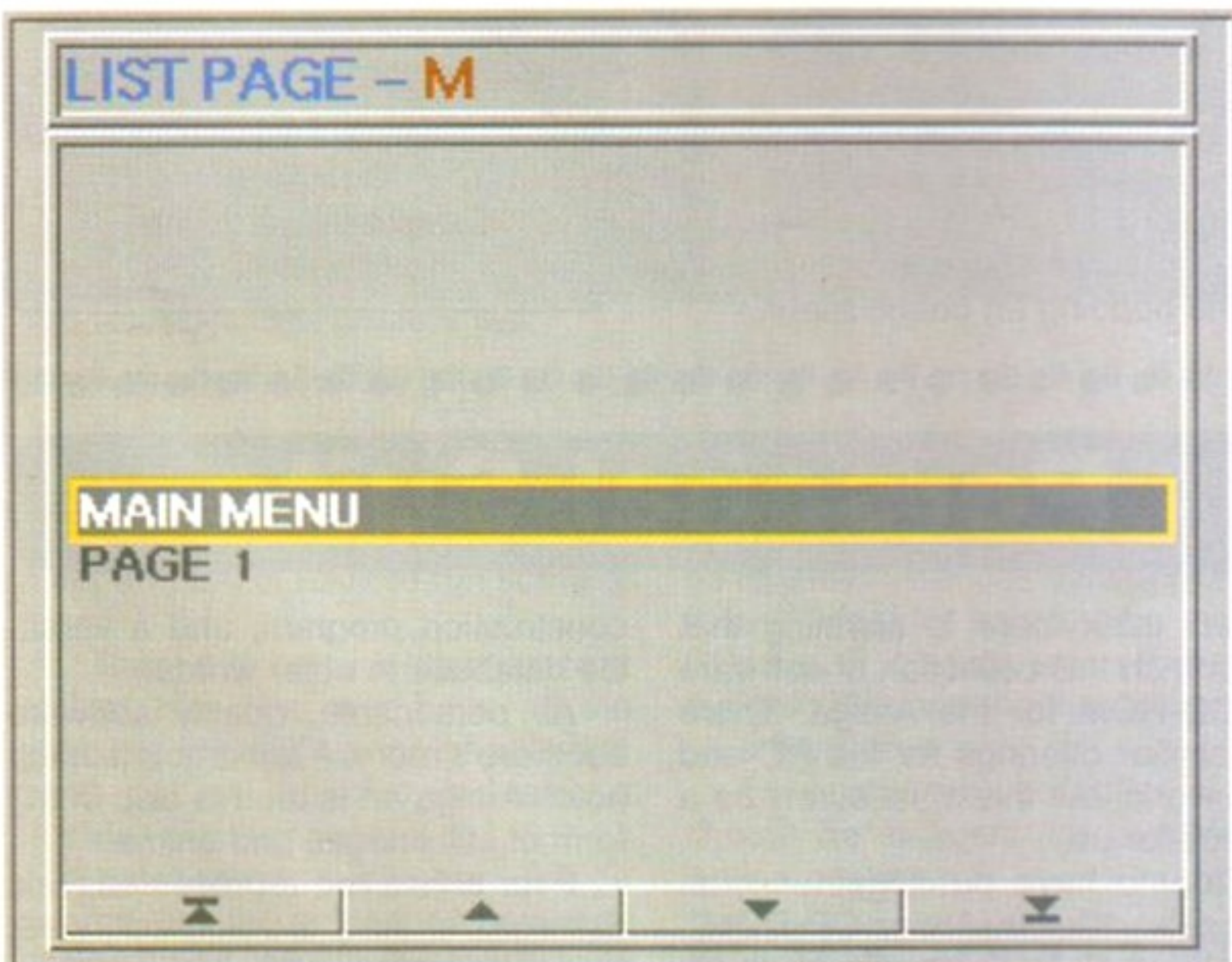
MME Pro £250

Contact

Optonica Ltd.
1 The Terrace
High Street
Lutterworth
Leicester
LE17 4BA

Tel. 01455 558282

Fax. 01455 559386



A list page allows the user to scroll through files or subjects. When the target is highlighted a click on the left mouse button takes you to that subject, or opens that file.



How images appear on screen can be selected from a variety of wipes and fades.



Control buttons are themselves 'boxes' that link different pages together.



A box can be set up to create a list of files or subjects.

CD Round Up

ARTWORX CD

The latest release from Weird Science brings us a compilation of all that is 'best' in the world of computer generated art. Or rather art created using a computer, for computer generated art is often somewhat akin to what you get when you give a chimpanzee a paintbrush.



Nicely rendered, highly colourful, musical notes.

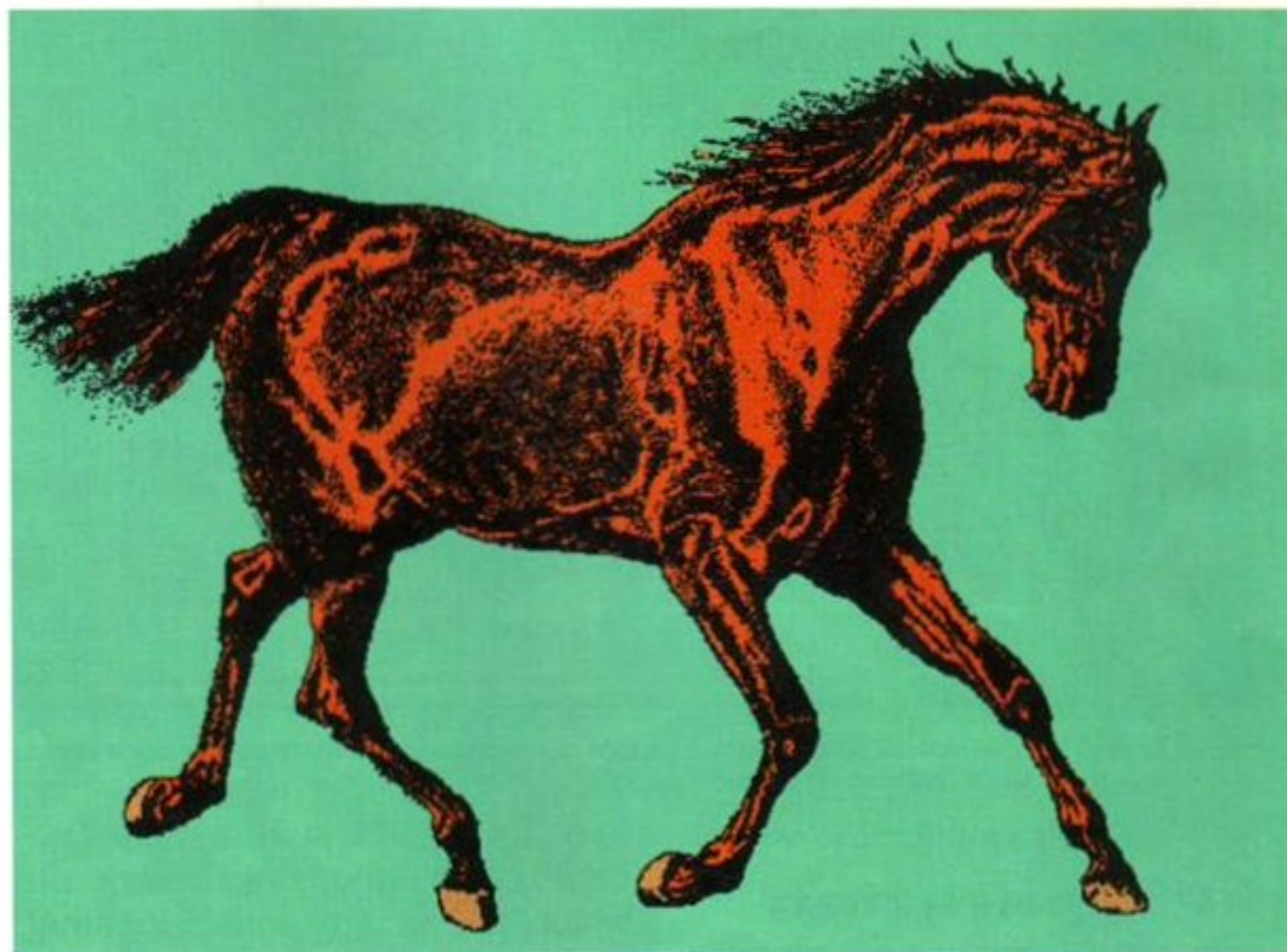
Some of the images on this disc could have been done by a chimp! These are the pictures that are by people who think they can draw. (Are these converted from GIFs on the PC?). However, there are thousands of pictures here by hundreds of great computer artists.

And Weird Science are not wrong, these pictures are great, maybe even the best.

Some of these images are astounding in their subject matter, or the way they have been constructed. Others are simple but so well done you have to admire them.

The disc contains images in AGA and ECS for-

CDs, generally containing interesting but not necessarily unknown programs for the Amiga, are in greater abundance than new software, so David Ward has something to DISCuss this month.



A simple yet effectively created horse.

mats, although a few of the latter seem to have been accidentally saved in 256 colours. There are thumbnail and text indexes, and there are AmigaGuide front-ends to help you view them, or you can use the selection of Amiga tools available.

A commendable collection for the budding art connoisseur.

RATINGS

Rating 89%

INFO

Price: £9.95

Publisher: Weird Science

Formats: Amiga, PC

Personal Write Wells_WarWorlds.txt

PG 1 LN 29 CL 1



BOOK ONE

THE COMING OF THE MARTIANS

CHAPTER ONE

THE EVE OF THE WAR

No one would have believed in the last years of the nineteenth century that this world was being watched keenly and closely by intelligences greater than man's and yet as mortal as his own; that as men busied themselves about their various concerns they were scrutinised and studied, perhaps almost as narrowly as a man with a microscope might scrutinise the transient creatures that swarm and multiply in a drop of water. With infinite complacency men went to and fro over this globe about their little affairs, serene in their assurance of their empire over matter. It is possible that the infusoria under the microscope do the same. No one gave a thought to the older worlds of space as sources of human danger, or thought of them only to dismiss the idea of life upon them as impossible or improbable. It is curious to recall



The on-board books are best read via AmigaGuide, but who's to stop you using Personal Write?

Personal Suite

I don't think there is anything that can match this collection of software on CD-ROM for the Amiga. There are similar offerings for the PC and Mac world, but this must surely be a one-off for us.

Cloanto have put together what they call a "Quality Amiga CD-ROM", and the box it comes in certainly lives up to these words. It is a stylish, round, blue tin, as opposed to the flimsy plastic 'jewel-case' we normally encounter.

So what do you get for your money? Personal Paint, Personal Write, Personal Font Maker 1 & 2, and SuperBase 4 Personal. A paint package, a word processor, a font

construction program, and a versatile database in other words.

All personable, quality software but there's more. A fair amount of top notch Amiga art is on this disc in the form of still images and anims.

Four artists are represented; Eric Schwartz of 'Amy the Squirrel' fame, Karl Bihlmeier and his creation 'Hermann', Jim Sachs the renowned Amiga artist, and Dr. Chip - who appears to have created all his work on the PC.

Fortunately, Cloanto have spent many hours converting these .FLI anims (a PC format) to our very own ANIM system, and those of Eric Schwartz too. This time from

PHASE 3

What can I say that I haven't already said before? Another issue from E.M.Computergraphic in their superb series of discs for the desktop publisher and desktop videographer.

Tons of fonts, some never before released; clipart - military, sport, events, transport and world; images - bikes & boats, Dungeons & Dragons, Deep Space 9 & Star Wars, cars, castles, and more; plus over 67Mb of video backdrops in many formats.

Look you lot, get your cash out of that dusty wallet and send off for this disc and its previous relations.

You won't be disappointed. And keep an eye out for Phase 4, which Errol and the guys at EMC claim is going to be the "ultimate" disc for Scala users.

RATINGS

Rating 94%

INFO

Price: £39.95

Publisher: E. M. Computergraphic

Format: Amiga



Even more images. Step forward Dr. Who.

Moviesetter. Slight problem... no sound, but the original formats are on here as well although you'll need a fair amount of RAM to run some of them.

There's a considerable amount of text too. Not only have all the manuals for each piece of software been put on the disc, but also a number of other books.

Some are specifically Amiga related, like the guide for ARexx and AmigaGuide, others are all classic works from the likes of Edgar Rice Burroughs, H. G. Wells, and so on. All are accessible from within the AmigaGuides on the disc.

There are 27 Kara fonts for your use, along with Cloanto's own image format - PNG, or Portable Network Graphic. This was designed in case GIF was protected by copyright as

the creators were pushing CompuServe to do.

One other Cloanto tool is provided to test differences between directories - ideal for people who master CDs, as it detects errors between the gold disc and the master version on a hard drive.

An outstanding collection which should be resident on everyone's Amiga desktop.

RATINGS

Rating 98%

INFO

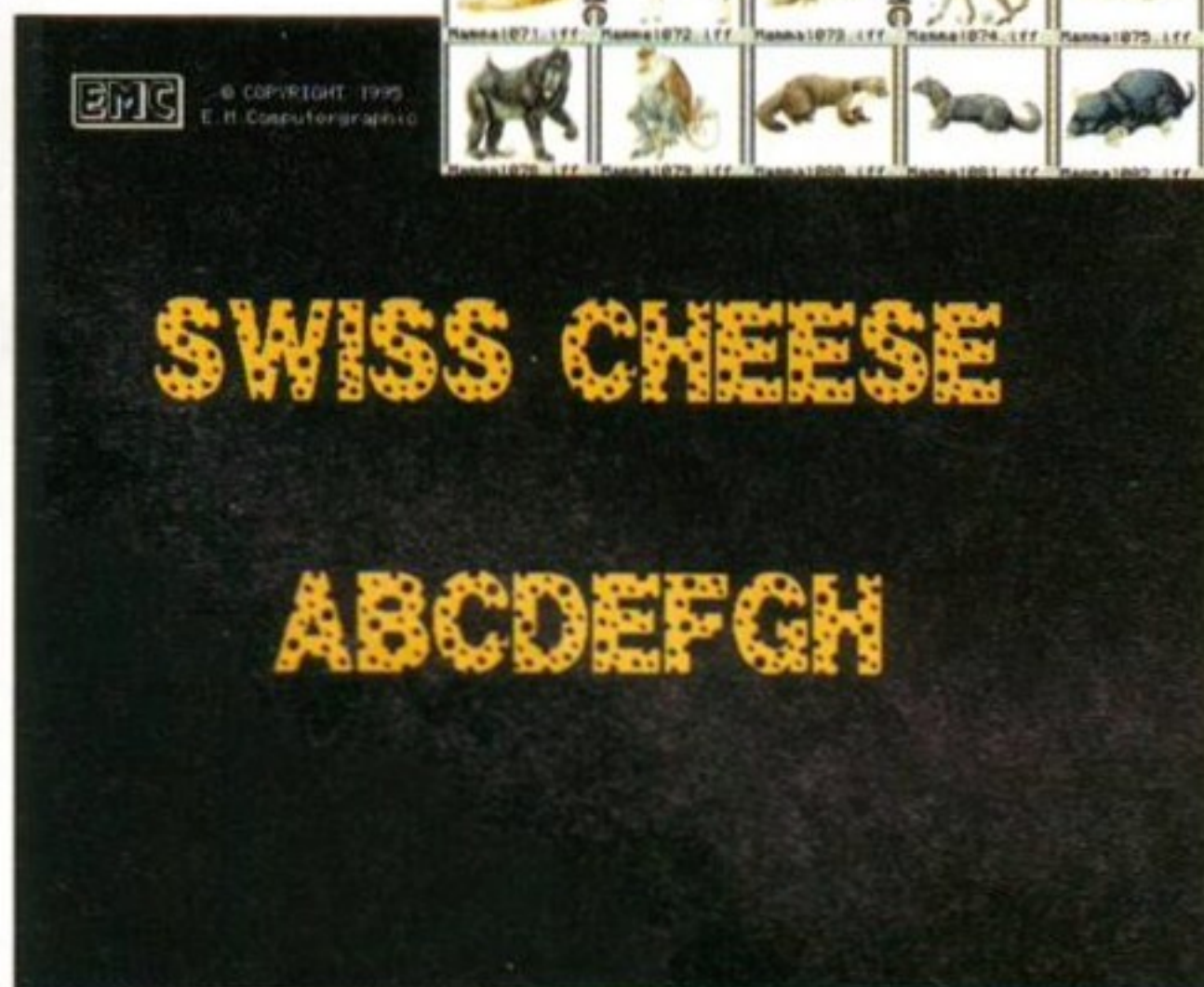
Price: £49.95

Publisher: Cloanto

Format: Amiga



Top quality EMC colour clipart for DTP.



A previously unreleased EMC font. Ideal for that caption for your holiday home video of Switzerland.

CONTACTS

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1 Rowlandson Close, Leicester, LE24 2SE
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Eml. sales@weirdscience.co.uk

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1 - 33100 Udine, Italy
Tel. +39 432 545902 Fax. +39 432 609051
BBS. +39 432 545905

E.M. Computergraphic
8 Edith Road, Clacton-On-Sea, Essex. CO15 1JU
Tel. 01255 431389 Fax. 01255 727751



See Amy strut her stuff from within Personal Paint

Palladium Drive

David Ward test drives the fitting of the Kate Moss of hard drives, the JTS Palladium.

"The moving finger writes and, having writ, moves on." Omar Khayyam's great saying, and one that neatly describes progress. Although it may not apply to hard drives, as it continues about all your piety and wit would not change a word of it. Omar was before his hard drive time.

When the Amiga A1200 first appeared on the scene, because of its shape, it was thought that the only hard drives that could be fitted into it were the latest, and therefore expensive, 2.5" devices, originally designed for portables.

Then, some enterprising souls discovered that they could squeeze the larger, and cheaper, 3.5" drives into the A1200 with the help of some surgery on the metal shielding.

This has remained the case, no pun intended, until now, with the introduction of the Palladium JTS850 which is brought to you by by HiQ—the PowerStation and Siamese people.

Slimline

This new drive is slim. Very slim. I'm not kidding you when I say that this 850Mb drive, which contains 16 read/write heads, is only the thickness of about four floppy disks stacked one on top of the other. I think you'll agree with me... that IS thin!

The drive is supplied already prepped and formatted. System 3.0 and MagicWB are pre-installed, along with a further 25Mb of PD bits and pieces. More on those later.

The drive is split into two partitions. The bootable one is 100Mb, with the remainder devoted to Work.



The Palladium drive and its 'legs'.

Installation

So what else do you get for your money? Apart from the drive, there is a special IDE cable that matches the larger connector on the drive to the miniature one on the A1200's motherboard.

A power splitter cable, that's how I would describe it, replaces the existing power cable inside the A1200. One end connects to the motherboard, one end replaces that which is already inserted in the floppy drive, while the remaining end terminates in a chunky four pin power plug for the hard drive.

A single A4 sheet of installation instructions is provided, and has to be read carefully to avoid confusion. Why? There are two sets of instructions on here depending on which drive

The good thing about the JTS drive is that it is in a sealed casing that stops the shielding shorting out vital components.

you have bought.

As Jimmy Young used to say, "This is what you do...". First off you take out the three screws underneath the A1200 that are along the front of the machine near the keyboard.

Put these somewhere safe in the same order you took them out - holes 1, 2, 3, and screws 1, 2, 3. This because self-tapping screws like to go back into the same hole they came out of, swap screws and holes and you can find yourself struggling to seat them fully home.

Next out are the screws that are half way up each side of the A1200, on the 'step' bit. Now flip the A1200 over and carefully prise open



The drive installed in the A1200.

the casing from the front of the keyboard.

The back of the lid is held by clips, so be careful not to snap these off. There is also a connection from the motherboard to the LEDs

mounted on this cover, so don't rip off the lid. Just gently move it to the back of the machine.

It's best to have something large and heavy at the back against which to rest the lid vertically. This also comes in handy when lifting out the keyboard.

Slide the keyboard back, out and over, so that it leans against the lid. Carefully ensure that there is not too much strain put on the green ribbon cable that joins it to the motherboard.

Now you can see the space for the drive and

Tools required:

Philips screwdriver
Torx screwdriver or 2mm Allen key*
(* may be supplied in future releases)

the hole in the shielding where the IDE connector is. One end of the supplied cable pushes in here, with the overlapping end towards the back of the machine.

After removing the power link from the motherboard to the disk drive, making note of which way round the connectors are, you can insert the replacement lead.

HiQ suggest removing the 'leg' from the drive which is going to be nearest the keyboard, so that it fits better and so that you can secure the drive using the supplied screws through holes drilled in the back of the case.

In practice I found that the drive fitted well with both 'legs' removed, and that it did not rattle around inside when the whole shebang was re-assembled. Use the Torx screwdriver or Allen key for this.

The good thing about the JTS drive is that it is in a sealed casing that stops the shielding shorting out vital components. Only the recessed jumper pins are exposed, so if you are worried about them they can be covered with insulating tape. Information on the jumper settings is handily printed on

the drive casing.

Drop (not literally) the drive into place, with the bottom left-hand corner snug into the ridge on the shielding and the edge of the A1200's plastic base casing.

Now plug in all the connectors, replace the keyboard and lid, flip over, and re-insert the screws back into their respective holes.

Reconnect the mouse, monitor, and power leads, switch on and stand back in amazement at the speed at which your upgraded Amiga boots to Workbench.

Conclusion

It wasn't all that long ago that 850Mb drives were in the realms of fantasy for home computer users. Now you can easily fit one in under 10 minutes within your A1200 for less than £200. And with Workbench pre-installed this is a dream come true for beginner and veteran alike. **AUI**

INFO

Palladium JTS850 kit
£199.95
HiQ limited
Gable End
2 The Square
Hockcliffe
Bedfordshire, LU7 9NB
Tel. 01525 211327
Fax. 01525 211328
Eml.
steve@hiqtd.demon.co.uk

The Official OctaMED 6 CD-ROM

Paul Overaa test drives the CD-ROM version of the famed music program OctaMED 6.

OctaMED is now, without doubt, the best tracker program available on the Amiga, and because it is more practical and allows for the inclusion of a far higher amount of data, it was only a matter of time before the package was released on CD-ROM. The benefit of doing this, of course, is that it becomes possible to put a great many other goodies on the same disk, and OctaMED has a great many goodies to offer.

Goodies

This is exactly what has been done. As well as OctaMED 6 itself, this CD-ROM contains loads of tracker modules, a brilliant collection of over a thousand Walkabout Music sound samples, and even things like Midi files for use with OctaMED. In addition to this plethora of mouth-watering delicacies, there is a variety of doc files plus some OctaMED related utilities.

If, incidentally, you've not upgraded to the latest version of OctaMED you will notice that the new version has a much improved user interface. The changes are obvious immediately the program loads because the screen is now split into a main control window, a separate tracker editor window, and an information window. The tracker editor display has also undergone several changes including the addition of scroll bars and a sizing gadget. The bar equalizers, which were previously part of the tracker display, have incidentally now also been given their own separate window.

Easy Access

AIFF - Audio Interchangeable File Format. A file format pinched from the Amiga for use on the Apple computer. It is a variant of our own IFF format for sound files.

MAUD - A format that supports up to 32-bit sound samples, multi-channels, and is an authorized variant of IFF.

MIDI - Musical Instrument Digital Interface. The physical interface developed by the keyboard manufacturers Roland and Sequential Circuit in 1984. It now applies to the language that the interface transmits, a variant of IFF.

WAV - Abbreviation for Wave as in 'sound wave'. A format developed from the Microsoft Windows Resource Interchange Format (RIFF), itself a type of IFF.

XPk - A compression system that uses various external libraries, with exotic names like Nuke and Shri, to provide different levels of file size reduction.

Libraries are chosen by the user depending on the file type or the speed of compression required.



In addition to the main program, Weird Science thoughtfully provide many extra utilities.

8 and 16-bit

One new feature of the OctaMED 6 is that it can handle both 8 and 16-bit sound samples. Options for temporarily freeing the Amiga's audio channels have been added (so that other music programs can be run without having to quit OctaMED completely) and those long awaited Midi file saving options have been added. You can now save Midi file type 0, and load Midi file type 0 and type 1.

There are new file compression options (XPk and Powerpacker), provision for saving modules as executable files, support for MAUD, AIFF and PC .WAV samples, a Tocata Capture window for users of Tocata sound cards, and improved internal buffer arrangements. A tempo

One new feature of the OctaMED 6 is that it can handle both 8 and 16-bit sound samples.

operations window has also been added to allow easier tempo conversion. Another important provision is ARexx support within OctaMED Pro itself (the standalone player program has of course been controllable via ARexx for a long time).

This Official OctaMED 6 CD-ROM comes with a printed OctaMED 6 tutorial manual so, if you are looking to get into music making on the Amiga and don't already possess OctaMED 6, then this particular offering makes a great way to start. **AUI**

INFO

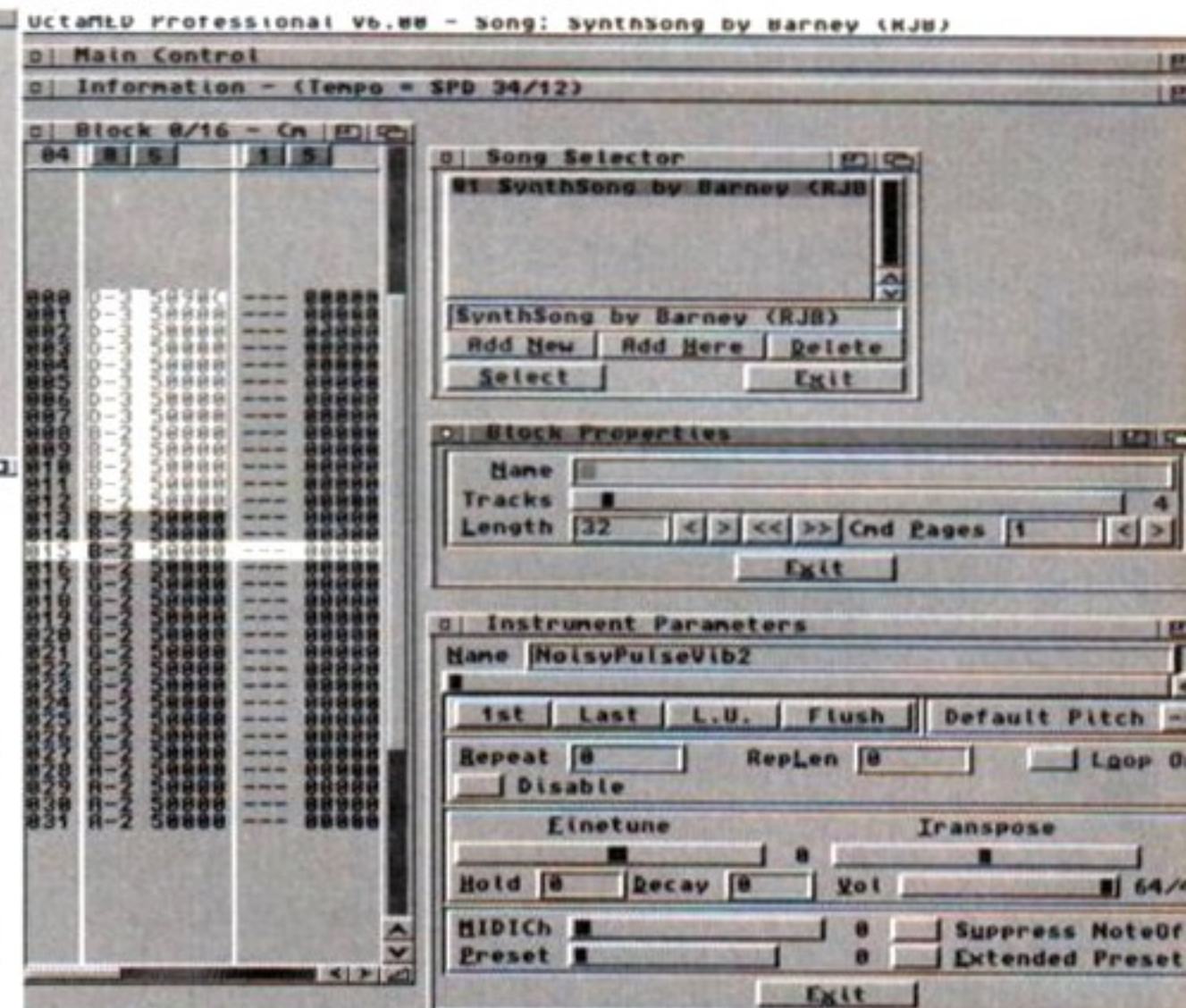
Overall Rating 95%

Price: £29,95

Publisher: Weird Science

Contact:

Weird Science
1 Rowlandson Close
Leicester, LE4 2SE
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OctaMED's new display makes the program much easier to use.

The OctaMED Story

Tracking is actually one of the oldest of the Amiga's music areas simply because, right from the start, programmers needed a fast, convenient way of creating sound for games and demos. One of the initial utilities on the scene was called SoundTracker, and within a few years various other types of 'tracker' type clones had appeared.

Essentially programmer's tools, these programs adopted programmer-like conventions for creating music sequences. Song descriptions tended to be built around crude lists showing the times and the pitches at which various samples should be played. Editing facilities were relatively limited, but while not ideal from a musician's viewpoint, this tracker method of composing rapidly became established.

It was during this time that Teijo Kinnunen produced his public domain tracker called MED. Over the course of a few years MED went from strength to strength and, as eight channel facilities were incorporated, the first commercial version of the product was released - OctaMED. A Professional version followed which allowed you to link up Midi synthesizers to the program so that riffs, bass-patterns, etc., could be played in a more conventional way - which is much easier for a musician than bashing away on the musically meaningless Qwerty keyboard. Even some Midi output facilities were provided. Development has continued, the program itself has both become more powerful and more user-friendly, and eventually the state-of-the-art OctaMED Professional version 6 arrived and now on CD too!

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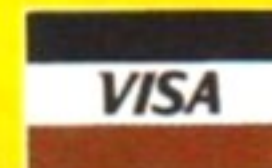
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DICE C

Paul Overaa test drives an Amiga compiler that it is becoming increasingly popular among top coders.

No-one gets far into the world of Amiga coding without coming up against the C programming language. It was (and still is) used to code much of the Amiga's operating system and support libraries, even the official Amiga technical manuals assume a reasonable degree of C literacy. C is a very easy language to learn, and even users who have never programmed before could, in theory, write and compile simple programs within five minutes of installing a C compiler environment.

In the past, however, this rarely seemed to happen, and one reason compiled language was so difficult for beginners to use was that compiler tools tended to be command line based. Compilation and linking required long command lines, and even the slightest of errors (sometimes just using the wrong case for particular compiler options) could cause the whole process to fall to pieces.

Commands could be automated by creating files called 'link' files which held the appropriate compiler and linker instructions, but this, if you were new to C, could also often be fraught with difficulties. The whole thing was usually taken a step further because 'Make' utilities were available that could look

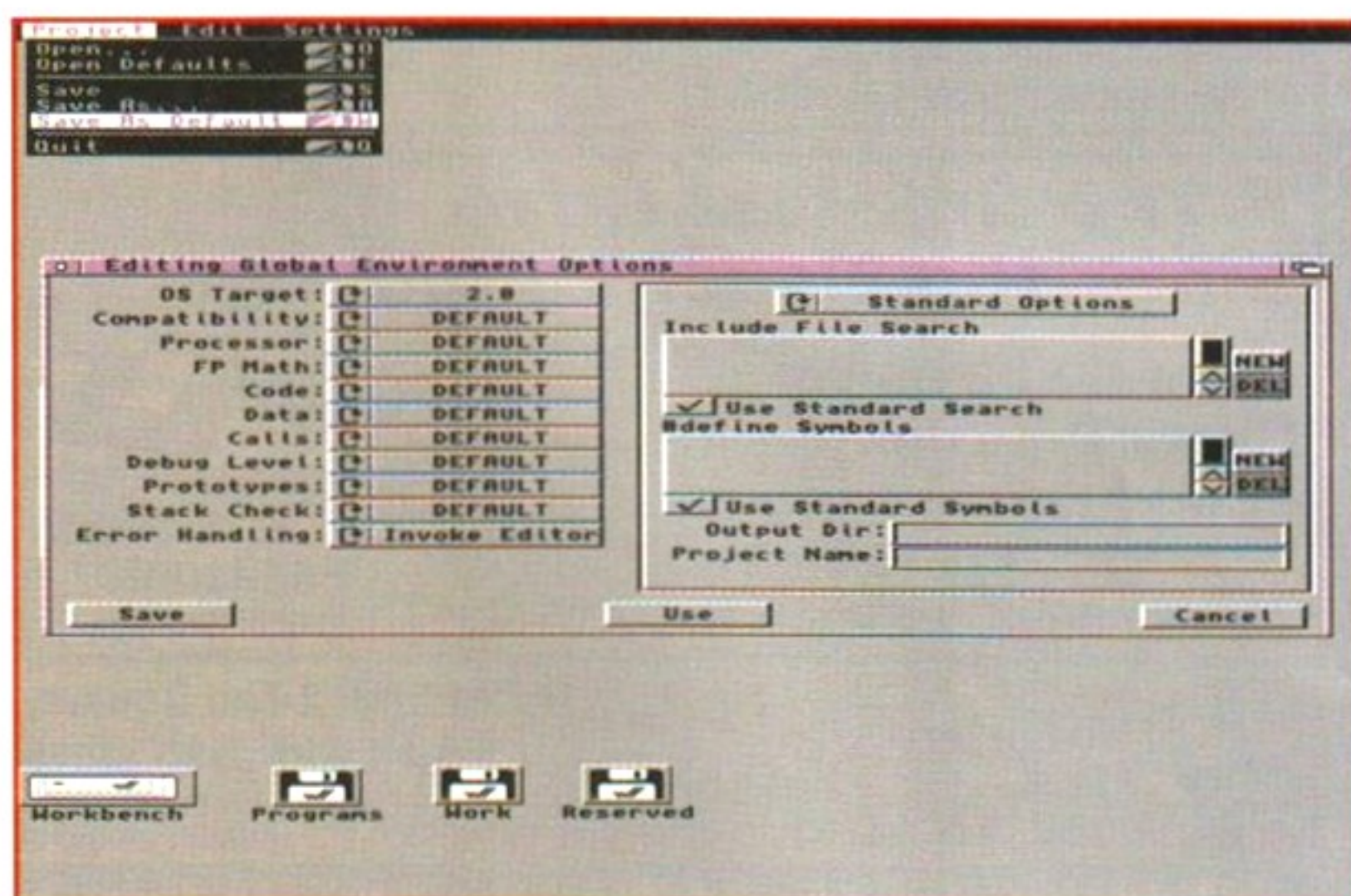
at disk files, tell whether they've been altered or not, and automatically recompile any files that have been modified, relinking the project so that an up-to-date executable program was always available.

Sounds great and it was great - but creating make files, and specifying the dependencies which exist between the various files of the project, was yet another nightmare for the newcomer.

Friendly Frontends

Compilers and linkers today are still driven in much the same way as they always were. What has happened in recent times is that compiler writers have added user friendly 'front ends' to their packages. This trend has turned the mechanics of C program construction into an entirely different situation, and nowhere is this more apparent than with DICE C.

The DICE C Language Development System, to give it its proper name, comes from the Obvious Implementations Corporation, and it is very clearly THE rising star in the world of Amiga C coding. The package includes a compiler, linker, source code management tools, a debugger, on-line help, and



DICE's Workbench based VMake front end.

everything else you need to write your own C programs. The compiler and support libraries conform to the ANSI C standard (although there are some Amiga specific extensions provided), and while it is a joy to use on a hard disk machine, DICE C will also run perfectly happily on a 1Mb twin-floppy Amiga.

User Friendly VMake

One of the major keys to DICE's success is that it is provided with a brilliant front end called VMake. This allows you to quickly create, edit, compile, link, and debug projects without ever having to resort to the Shell command line. An interaction that all too often in the past made life difficult for the newcomer.

One of VMake's most noticeable benefits, as you get past the beginning stages of C programming, is that it can also handle projects which contain many different files. As programs get larger, and more complex, they become very cumbersome to work with

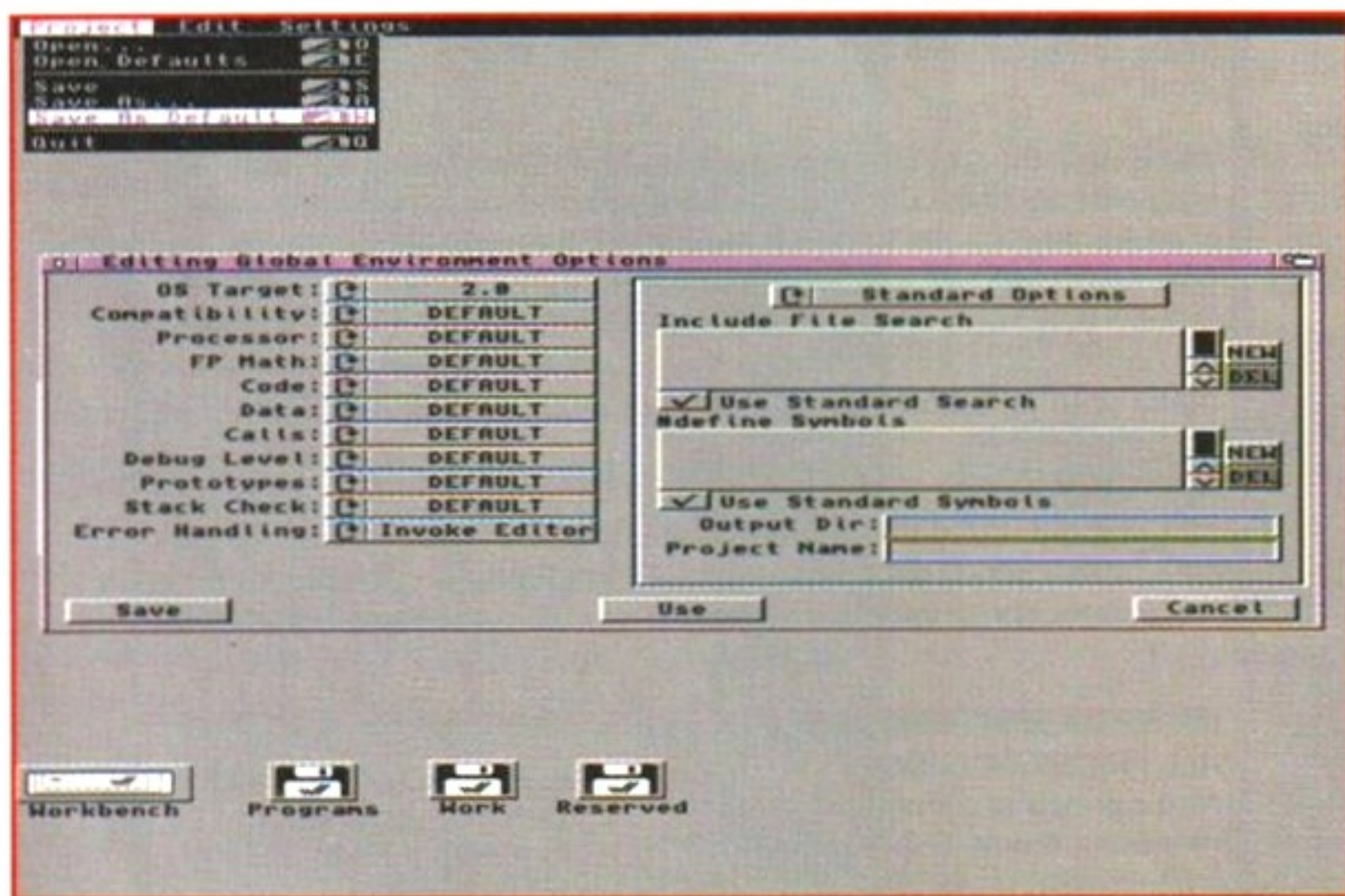
when treated as a single source code file. So programmers tend to break up their code into smaller, more easily handled, units or modules.

You may, for example, have a module that contains all the allocation and de-allocation operations (for acquiring memory, system resources, and so on) that your program needs to perform. Another module may contain all the event handling code that is needed for a program to communicate with Intuition or perform other Amiga-related operations. There may be one or more modules that provide other functions that the final program requires access to. Finally, some code may be needed which controls

the interaction of all the other routines present in the program and the chances are that this too will be created as a separate unit.

VMake eliminates the need to maintain make files for these sorts of multiple module programs by allowing you to use standard Workbench requester operations to specify the list of files which constitute the project. VMake is able to use

One of the major keys to DICE's success is that it is provided with a brilliant front end called VMake.



DICE's VOpts compiler options utility provides an easy way to set compiler and linker options.

this list to generate the makefile, compile all the files associated with the project, and perform all the appropriate linking operations automatically. All you, the programmer, need do is 'click' on the VMake utility's 'Make' button - and the hard compiling/linking work gets done automatically.

A few seconds later you have your runnable program - it really is as simple as that.

Point and Click

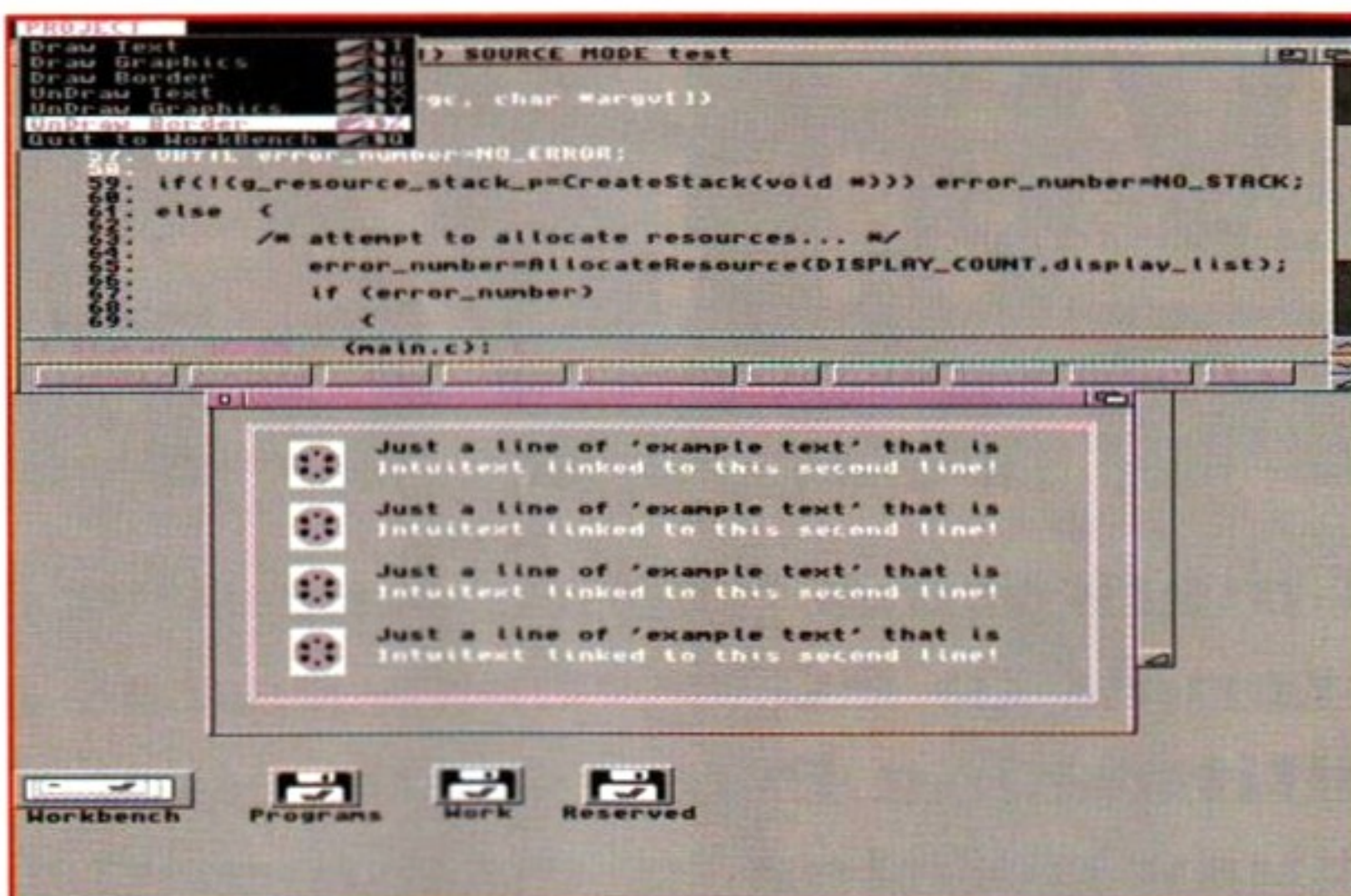
DICE also includes a VOpts front end that allows you visually to set compiler options that the project demands. VOpts talks directly to VMake via ARexx and so VMake automatically takes account of VOpts settings whenever it rebuilds a project. VMake is then the primary user interface for the DICE user and it allows you to edit and build the files needed for C programming projects using simple 'point and click' style operations.

You ask VMake to create a new project by selecting the 'New' option from the VMake Project menu. When the file requester appears, you then choose a project drawer and enter a file name (VMake will create a special project file of the same name adding a .DICE filename extension). Once a newly created project is created the appropriate source code (and header) files can be added. This is done by selecting the NEW gadget near the middle of the right hand side of the VMake display and selecting the files you wish to add to the project using the file requester that appears.

Compiling

To compile the project all you then have to do is select the Make button in the bottom left corner of the VMake display. VMake will compile and link the code providing details of what's going on in a console window as it carries out its various tasks. You can even run the program without leaving VMake by clicking on the VMake Run button. In this case VMake always checks first to see that the project is up to date (i.e. that no changes have been made to the source code) before it runs the program for you (recompiling and linking if necessary).

Almost all DICE users use the VMake 'visual' C programming environment for their projects, but you can still do things the old fash-



Program debugging the easy way!

ioned 'Shell' way if you wish. DICE uses several stages as it prepares a program - a utility called dcpp preprocesses the source code, another called dc1 compiles the preprocessed source, an assembler called das assembles it, and finally a linker called dlink creates the final program.

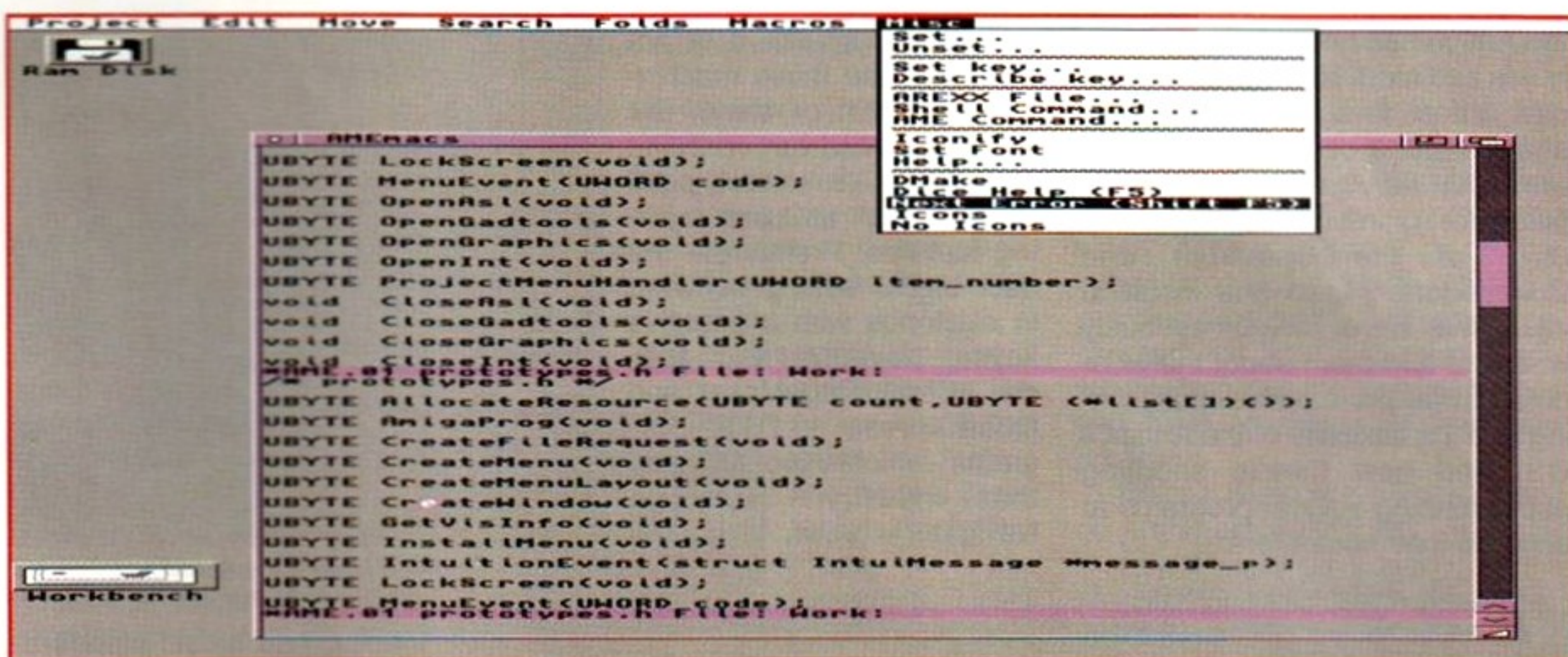
Even at the Shell command level DICE has a compiler front end

many other tools. Two editors, AME and DME, are provided, and both permit easy editing of source code and other text files (AME is in fact a brand new version of the Micro-Emacs editor which has been created especially for DICE).

DICE will integrate with any other editor that supports ARexx, so if you are used to Cygnus Ed, or the excellent SAS C se editor, and

programs is create a suitable named project, add the source file names using the VMake NEW gadget, and then just hit the Make button! You can set up, create, edit, compile, link, run, debug source files and programs without ever having to leave VMake.

DICE C does, of course, come with full documentation (with some good initial tutorials), all the ANSI required libraries, and masses of examples are provided on disk. As well as simple sources which illustrate basic C programming, a number of more advanced source code examples including code for a shared library, a printer driver, a device, and a dos handler. Sources for a number of DICE utilities are provided, and even the code for the DCC compiler front end is thrown in so that the more adventurous or experienced C programmer can see how this was written. This latest release shows that DICE C, although previously good, is now going from strength to strength. When you add good technical support to this it's little wonder that the package is now becoming very popular indeed. **AUI**



The new AME editor in action.

utility called dcc that, with our simple programs, can produce the executable form directly. The outcome is that with DICE you can compile source code simply by typing:

```
1>dcc <filename>
```

Other Tools

DICE C, as all commercial compilers, comes with a great many utilities. There's an RCS source code management system which helps you maintain revision histories for your projects, an on-line help system, a debugger, a profiler, file compressor, disassembler, and

want to continue using it, then DICE will let you. Once your chosen editor is installed into the DICE environment you'll be able to edit files directly by clicking on the VMake Edit button just as when using the default AME/DME editors.

Conclusion

Do I like it? The short answer is yes! I've found the DICE environment very easy to come to terms with, and the benefit of the VMake front end arrangements, for both newcomers and established C users alike, are enormous. All you have to do to compile and run most

RATINGS

DICE C v3.1

EASE OF USE	96%
PERFORMANCE	98%
DOCUMENTATION	94%
VALUE FOR MONEY	94%

Overall Rating 96%

INFO

Price: £98.95
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Is Your Rival Showing Worlds

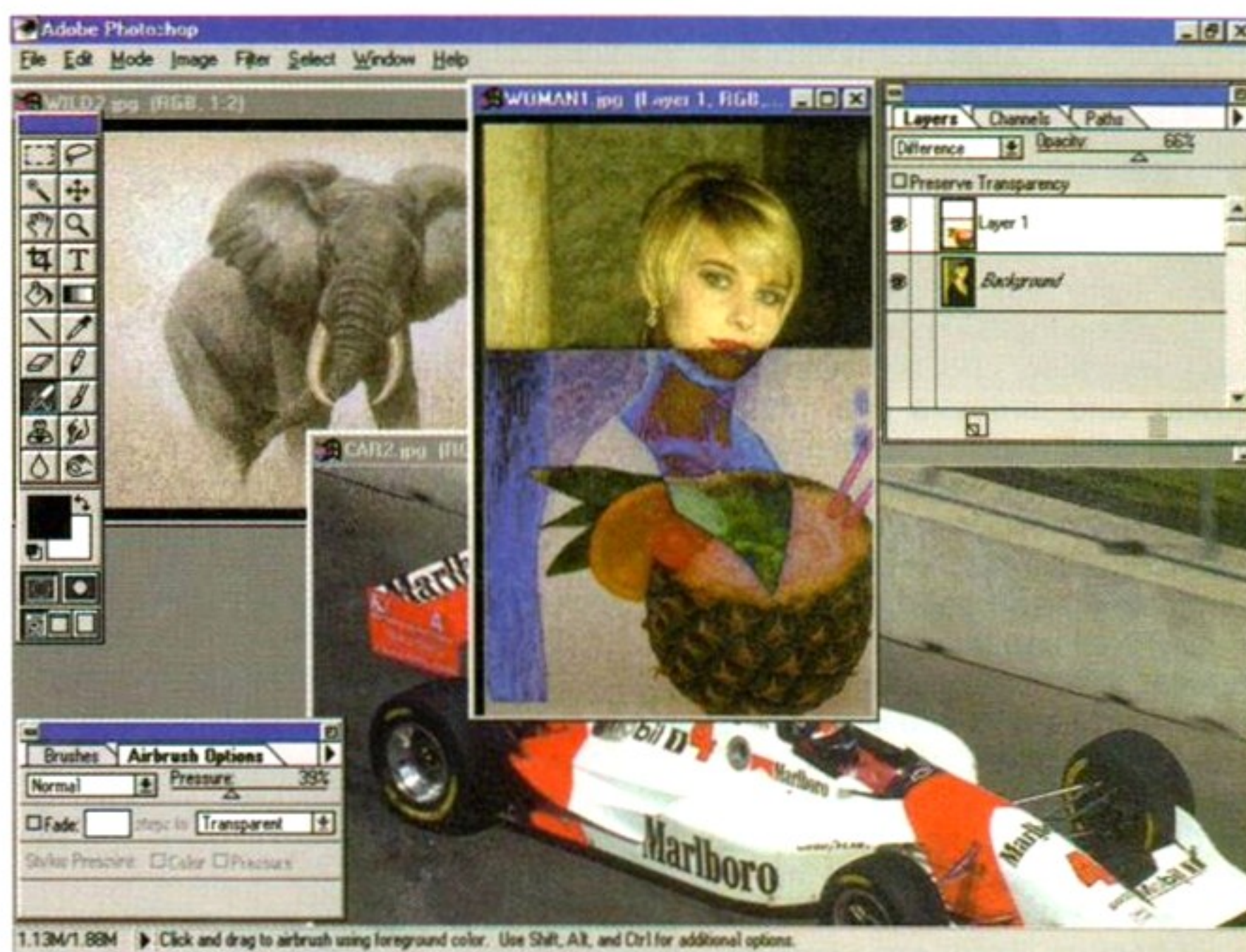
Heard all the marketing hype, seen the TV ads, and no doubt listened to PC owners boast about their wonderful multitasking PCs? Look, you don't have to wait for the busy pointer to disappear! Gary Fenton is trapped between two rival worlds.

Hey, everyone! You can have file names longer than eight characters on your new PC. You can run more than one Shell window at a time, and it's got this new thing called 'multitasking'!"

What the hell is this? Are they so blind that they haven't realised the Amiga has been doing precisely this and more since 1985? That's over a decade ago! It's taken PCs one tenth of a century to catch up with what us Amiga owners have taken for granted since the later days of the Spectrum and Commodore 64. To add insult to injury, they never took us seriously when we told them about the wonders of true pre-emptive multitasking and the flexibility of the Amiga's OS, and now they're shouting about running several programs at once on their computers.

Get Real

Let's take a step back here and look at this objectively, away from the bias we have towards the Amiga. I work professionally with PCs running Windows 95 and PowerMacs with their RISC processors, so like it or not I have to use these machines come rain or shine. But look what I can run on them: Photoshop - a serious paint program with amazing layering features; Premiere - the best digital editing software in existence with impressive keying, layering and special effects; PageMaker and QuarkXpress - DTP programs which revolutionised the industry; Netscape Navigator - grown to be the



Photoshop is an excellent image manipulation and art package for the PC and Mac. However, Photogenics is close behind snapping at its heels.



Macs have all the best programs. But I'm running this software on an Amiga A1200, thanks to Mac emulation!

leading and global standard for surfing the Internet. I think you get the picture. All the best programs seem to be on the PC and Mac.

However, not everything so wonderful originated on those computers. Remember MorphPlus from ASDG before they changed their name to Elastic Reality, and went big time converting it for Silicon Graphics, PCs, and Macs? Then there's LightWave, the most delightful 3D program you could wish for. That's out now for all platforms which originated from the not so humble Amiga. Even Directory Opus is being unofficially mimicked on the PC as shareware.

One thing which has been lost for ever is small, well coded, and optimised programs. Windows and Mac software is monstrous compared to equivalent Amiga packages. Installation sizes are big and memory resources are even bigger. You can't really do anything serious on a PC with any less than 16Mb RAM.

Take a look at Word. How ridiculous. The features may be unparal-

Let's take a step back here and look at this objectively, away from the bias we have towards the Amiga.

Central Processing Units - The machine's brain

Both the Amiga and older Macintosh machines share the same family of processors - the Motorola 68000 range. The latest generation of Macs are now based on the jointly developed PowerPC chips. These RISC, Reduced Instruction Set Chip, were created by IBM, Apple, and Motorola. They are far more powerful than the older CISC, Complex Instruction Set Chip, devices. Certainly a 68060 is slow compared to a PowerPC processor, which even gives the fastest Pentium processor a good bashing.

Programs written for the 68000 series will not run on a RISC machine without some kind of emulation. This results in slower speeds due to the emulation process, but software written specially for RISC processors will run many times faster, although you'd be forgiven for thinking otherwise. For example, I was using the PowerPC version of Photoshop on a PowerMac and it felt no faster than Photoshop running on a 75MHz Pentium - and the Mac had twice as much RAM!

As you all know, most PCs sold now come with a Pentium inside. Clock speeds range from 60MHz right up to 166MHz, although you don't see new ones less than 75MHz these days. It's not possible to compare processor speeds of RISC, Pentium, and 68000 chips just by looking at their clock ratings. For example, in the space of one clock cycle (1Hz) a 60MHz RISC chip may calculate three instructions in that cycle, while a 60MHz Pentium could just perform two, and a 60MHz 68000 (for argument's sake) may perform just one. Practical speeds tests are for more realistic. MHz and MIPS are Meaningless Indications of Processor Speeds. (MIPS, get it? Actually MIPS stands for Millions of Instructions Per Second).

leled, but I believe Protext and Final Copy are better since system demands are far lower and most people only use 20% of Word's features anyway. Notice how long PC programs take to load. So long that they have 'loading' times similar to that of the cassette based software on the Spectrum and C64.

Evolution?

The greatest advancement made on the PC recently is Windows 95. Taking hundreds of programmers to engineer, and costing millions to get out. Great, but it's got so many bugs, some hitting you in the face harder than a 50 pound lead shot that only the lord knows how the reported 400,000 beta testers never found them! And if they did, what strain of madness caused MicroSoft to release a frighteningly bugged operating system? And this is no exaggeration either. I've used it non-stop the past four months and it has never failed to amaze. One program can crash, which Windows 95 occasionally traps, prevents the machine from dying and releases

the dead program's memory, but then suddenly it reports another program has crashed, then the crash requester crashes, and finally Windows topples over and falls to the ground in a cloud of dust and lost data.

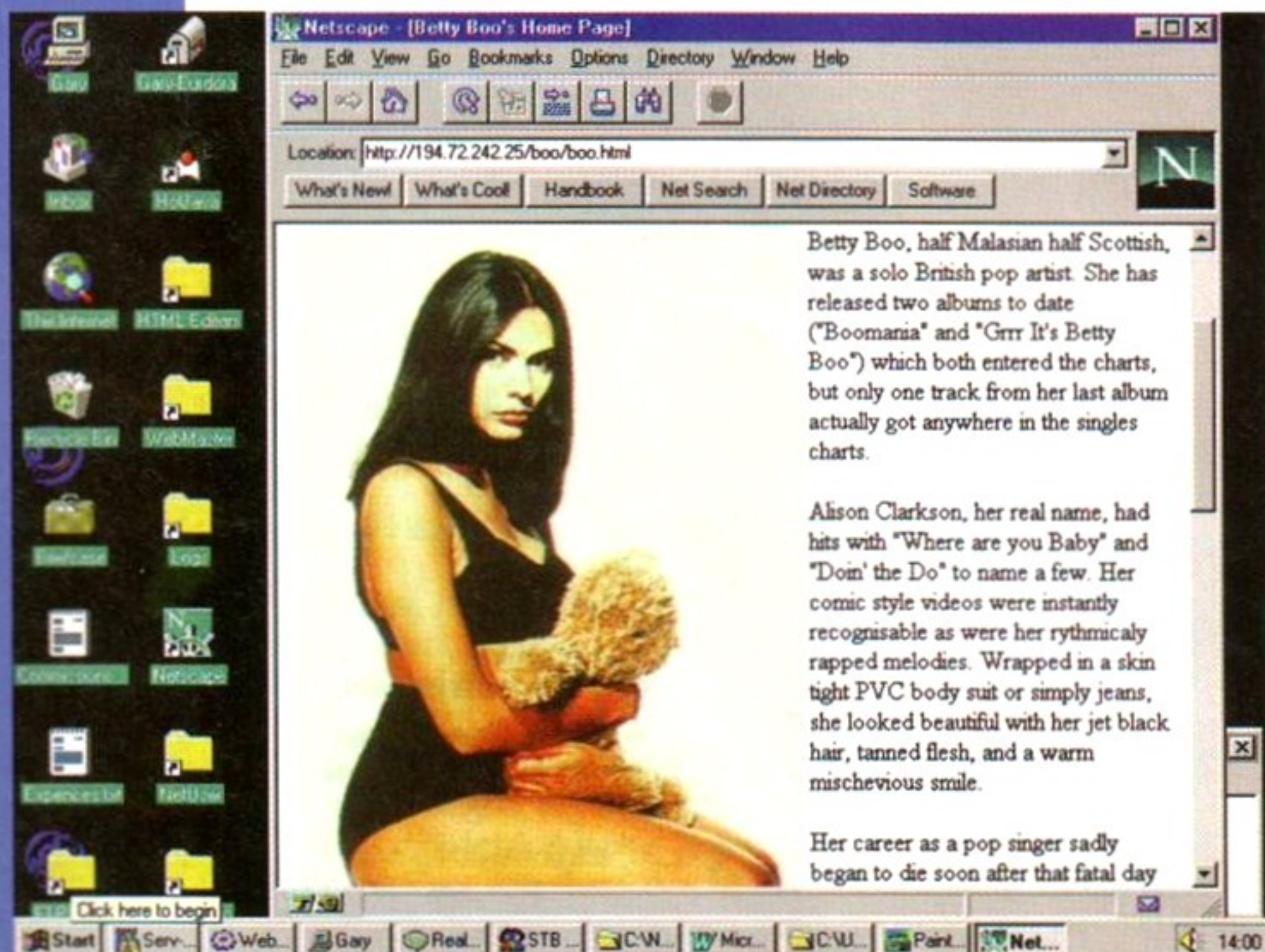
Did you know that Windows comes with a hidden paint program? In a rare situation I found myself drawing with an icon I dragged across the screen! Trails were being left in its wake which was fun, but a reboot was called for.

So how about this famous multitasking? Many programs can be run at once and swapped between, you can format a disk and print out simultaneously, but to what end? Disk formatting appears to suck half the power from a Pentium as the screen refresh rate grinds painfully to a halt as it does when you don't have enough RAM available. This isn't funny considering an Amiga 1200 dances circles

around a 16Mb Pentium PC when it comes to multitasking and multiple disk operations.

However, there are a few things I envy of Windows 95's features. The built-in virtual memory han-

Despite its unproductive nature (at least to anyone who's used a real multitasking computer), the Mac is more or less idiot proof. There's no DOS or Shell to mess things up in, software installs with



Despite its faults, Windows 95 does things the Amiga should do, and cool programs like Netscape Navigator doesn't help our cause either.

dling is excellent and dynamic, while memory protection is something the Amiga badly needs too. Drag and drop between every new Windows application is extremely useful, and has to make it in to the next Amiga OS.

In my professional opinion I conclude that the Amiga is still the most productive and flexible machine, but lacks the cream of the industry's best software packages. However, whatever anyone else can do on a PC and Mac, we can do just as well and perhaps faster on Amigas. Strange but true.

Operating Systems

The Mac, by definition, is by no means a pre-emptive multitasking machine. In fact I call it mono-tasking. Even when a requester of any description pops up you have to deal with it before you're allowed to touch anything in the background. That's right. You've got to wait for the computer to be ready, not the other way around like it should be.

just two mouse clicks, and the computer makes suggestions when you're low on memory or if you've copied a file to the wrong place. Boring! To top it all off, the interface doesn't have real time scrolling drag bars, it looks seriously dated, flat, and colourless. If you want to improve the aesthetics then you have to install a shareware program!

Before Windows 95 I wouldn't go anywhere near a PC - even for money. This is far superior to the Mac OS. It looks much nicer, performs far more smoothly and efficiently, and is generally more fun to use. Being a 32-bit OS it runs new software faster than the old Windows 3.1. It makes me laugh because the Amiga has had an OS which can run software specially for 32-bit processors for 11 years now. **AUI**

Next month:

The comparisons continue as the Mac enters the equation.

Before I go I leave you with this song: "If you're stupid and you know it, buy a Mac..."

Explanation next month if you haven't worked it out for yourself by then.

What strain of madness
caused MicroSoft to
release a frighteningly
bugged operating
system?

March 96



February 96



January 96



December 95



November 95



October 95



September 95



August 95



July 95



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Seeing is Believing... Maybe

Part II

TechnoWorld

Never content with today, the intrepid Martin Witton again heads out toward tomorrow, followed by a somewhat less wide-eyed AUI team. (Their motto may well be, as they tag along after the long striding techno-obsessive Witton, "This is no time for bravery - you go!" Or is that phrase a shade overdone and past its sell-by date now?).

Their eyes may, however, gleam less than the Wittonian orbs because he has been the one staring most at those glittering screens again. It's those computer graphics that dazzle and draw us all these days that he has been watching.

Computer graphics are playing an ever-growing role in our lives. Here in the second part of this **AUI** Special Report, Seeing is Believing... Maybe, we have the experts commenting on what is happening with CAD/CAM, the multiplicity and

improvement of compression standards, 3D creation, and other fascinating aspects of this visual TechnoWorld.

CAD is Cool

CAD/CAM is computer aided design application systems, most of them designed to be, if not always succeeding in being, interactive and easy to use. CAD/CAM is, according to expert Bill Boffin- and what an appropriate



CrystalEyes 2 views screen images in true 3D.

name that is - like using electronic clay to make a puppet. Now you know.

CAD/CAM systems are increasingly employed in computer aided manufacture, computer aided engineering, electronic design, automation, mechanical engineering, architecture, engineering, and construction.

All these industries have benefited from technological developments in computerised graphic design, particularly in marketing. Products are now available

VR Selling

Virtual reality is coming into one of the main areas of marketing - that of selling to people at a remote point. An example is of a salesman with a laptop who goes to China, opens up his notebook generating the model of the design of a helicopter, including the fine details such as the fabric used for the seats, and the internal and external fit up. The company decide to purchase, making any necessary amendments to suit them, and the salesman comes back to the UK. The helicopter is made in the UK, and the first time the purchaser actually sees it is when it is delivered. Some of the most recent plane designs have never gone to a prototype, but been fully CAD/CAM designed and then taken straight to manufacture. It certainly sounds great and it doubtless works, but would you first set your eyes on a helicopter you were buying on delivery?

Sony Playstation - the latest console on the market.



to make complex conceptual information understandable through dramatic design presentation. For example, Crystal Eyes 2 from Virtual Presence, is claimed to make computer or video generated images leap out of the screen in true 3D stereo depth. Which is a pretty major claim.

Virtual reality is a part of this creative process, especially for 3D use. VR can be generated either from a computer system (interactive VR) or, as in the case of Crystal Eyes, via stereo eyewear (Immersive VR). VR works by utilising the components of the brain, which receives individual pictures

through sight, integrating the two images, attempting to recreate the way we see which can be very helpful in areas of design.

The result for manufacturers is that it lessens, or sometimes entirely eliminates physical prototype requirements, enhances design visualisation, and facilitates walk through demos for clients. All of which can save large amounts of time and money.

In 1954 the BBC employed their first graphic designer. Up to the 60s the main means of animation was card engineering. In the 70s rotoscoping was the height of technology. The next landmarks were the arrival of computerised rostrum cameras, and then the big advance to the Quantel Paintbox employed by the BBC in 1982.

The Paintbox was used to create the BBC's transparent logo globe symbol. Things have

changed considerably, and now the BBC has its own graphic design department. One of the latest developments in television that is having a dramatic impact on TV programming is the use of computer generated graphics to enhance the overall image of a programme, and improve the way information is conveyed.

Behind the recent upsurge in computer generated graphics is leading edge computer technology, such as Autodesk's 3D Studio, which the BBC is using for a whole range of programmes. And also in the USA the wide distribution of the Video Toaster and Lightwave on the Amiga. Now, in the UK, through companies like Premier Vision, who both distribute Lightwave and use it to create animation and special effects, Lightwave is gaining on 3D Studio, though NewTek's brilliant program is sadly being increasingly used on the PC rather than the absent Amiga.

Computer Aided Services (CAS) offer complex scenes containing many 3D models which can be built with walk throughs or fly arounds and constructed and rendered for a finished PC based animation sequence.

CAS can design and construct a CD-ROM title on almost any subject. A 3D digitizing system enables complex models to be digitized into most 3D packages such as 3D studio and AutoCad. CAS has produced a demo CD-ROM showing the main features of its multimedia and the products and services.

REALITY IN ANIMATION
Vicon 370E
3D OPTICAL
MOTION CAPTURE FOR THE
ENTERTAINMENT INDUSTRY

Featuring
Kinematic
Modelling with
Joint Rotations
OXFORD
METRICS



Nichimen Graphics' Skeletal Animation System.

The Nth Degree

Nichimen Graphics is a Californian corporation with ten years experience in the computer graphics field. They have produced the N World Game Development Suite of tools for developers of interactive games which includes N Geometry modeller. It is patch-based, which means it can create either hard edged models like a tank, or organic forms as in humans. Other tools include N-dynamics for animation, scripting, and choreography; Skeletal Animation system, skeletal animation and motion capture editing; N-Paint, resolution independent painting; and N-Render, a photorealistic renderer.

Human Modelling

Human 3D modelling techniques have advanced so rapidly now that consumer hardware is powerful enough to cope with the demands of virtual realism. Gremlin Interactive's Actua Soccer Football simulation is a direct product of motion capture. The company filmed three footballers with six stroboscopic cameras recording free movement at up to 120 frames per second.

The subtlety of the human body in three dimensional motion has been difficult to achieve. Puppets have been used to get it right to produce electronic models in films. Oxford Metrics have put reality in animation with Vicom 370E,

Gremlin Interactive's Actua Soccer Football simulation is a direct product of motion capture.

a 3D optical motion capture for the entertainment industry.

Bill Boffin describes Oxford Metrics as the specialists in this area, with their development in kinematic modelling with joint rotations based on years of experience. Vicom kinematic modeller software computes the locations and rotations of body segments which can be input to all major computer graphics animation packages.

Bill Boffin uses many examples from the suppliers and developers to illustrate his presentation on



computer graphics. Apart from the sequences demonstrating how the milk bottle ad was made, two clips which he uses to demonstrate animation and visualisation I found particularly memorable.

When I was younger, one of the few rides I ever enjoyed at amusement parks was the Steel Stella on Clacton Pier. The ride started with a long climb up and then the car took off hurtling round and down the roller coaster. I didn't expect to ever go on such a ride again, (particularly as the Steel Stella burned down many years ago), but the Devil's Mine Ride - a clip of which Bill Boffin shows was shown took me on such a ride, and it was brilliant! The animated characters were extraordinarily real, as was the ride itself. (This ride is available as an MPEG file on the Aminet).

The other demo worth a mention is the Animation and Visualisation prize winning entry at Cannes, 'Locomotions' by Pacific Data Images. This film brought an animated engine to life, showing emotion through daring, fear, and humour. The result was a film of immense quality and lifelike effects.

Softimage

Microsoft Softimage is a developer of tools for 2D and 3D animation. Softimage 3D, developed for interactive media, video, and film professionals, has an intuitive user

interface to enable fast turnaround from concept to creation. Softimage Toonz is described as "the leading 2D cell animation software

**ReBoot creators
produced 60 minutes of
completed animation
in six weeks.**

for traditional cell animators who create animation for film, video, interactive games, and new media. Version 4.0 has just been released for Silicon Graphics.

Milk O!

The UK TV advertisement of the milk man directing milk bottles to doorsteps has fascinated most people who have seen it and most will have wondered how it was done. Bill Boffin explains that a storyboard was made from the script, and that the sequence was filmed without the milk bottles at all "The bottles themselves were designed by computer-shaping the top and body... Through trial and error the graphics designer worked out a series of movements and hops... Shadows were added to complete the realism."

Softimage Eddie is a professional digital compositing package for post production, special effects, and interactive media developers. Softimage Eddie gives users the opportunity to preview all effects prior to output and final rendering. It supports 30 different tools to provide capabilities that include compositing, paint, colour correction, titling, filtering, morphing, input/output stabilising, and motion tracking.

Microsoft's entry into the field of animation means that the whole animation business is taking off and is no longer simply for the occasional use but is a part of the mainstream of computer activities.

Softimage was used in, Reboot, what is claimed to be TV's first 3D animation series. ReBoot is a 100% computer animated series telling the story of Bob, Dot, and Enzo, 3D characters living in the city of Mainframe. ReBoot creators produced 60 minutes of completed animation in six weeks.

Sony Psygnosis have also used Softimage to produce what designer Nick Burcombe describes as 'cyberpunk, aggressive animations'. Psygnosis were bought out by Sony in 1993, and have done some exceptional work on the new Playstation 64-bit technology.

Putting Softimage with the Playstation, the Sony Psygnosis development team produced their futuristic racing adventure WipeOut.

It's sad that the creators of the first UK Amiga game are making

SOFTIMAGE

Industrial Light and Magic (ILM), famous for creating the visual effects for Jurassic Park, Star Wars, the Mask, and Forrest Gump, have brought Casper to the public through feature film animation. Animation director John McQueen said that they chose Softimage 3D to animate and articulate the ghosts, camera, and environment for Casper because it was the best software for the challenge.



Animated TV series "Animals of Farthing Wood" for Telemagination.



TV commercial for "Yorkshire Post" for Snowden Fine Productions.



"Asterix Parc" TV commercial for Hibbert-Ralph.

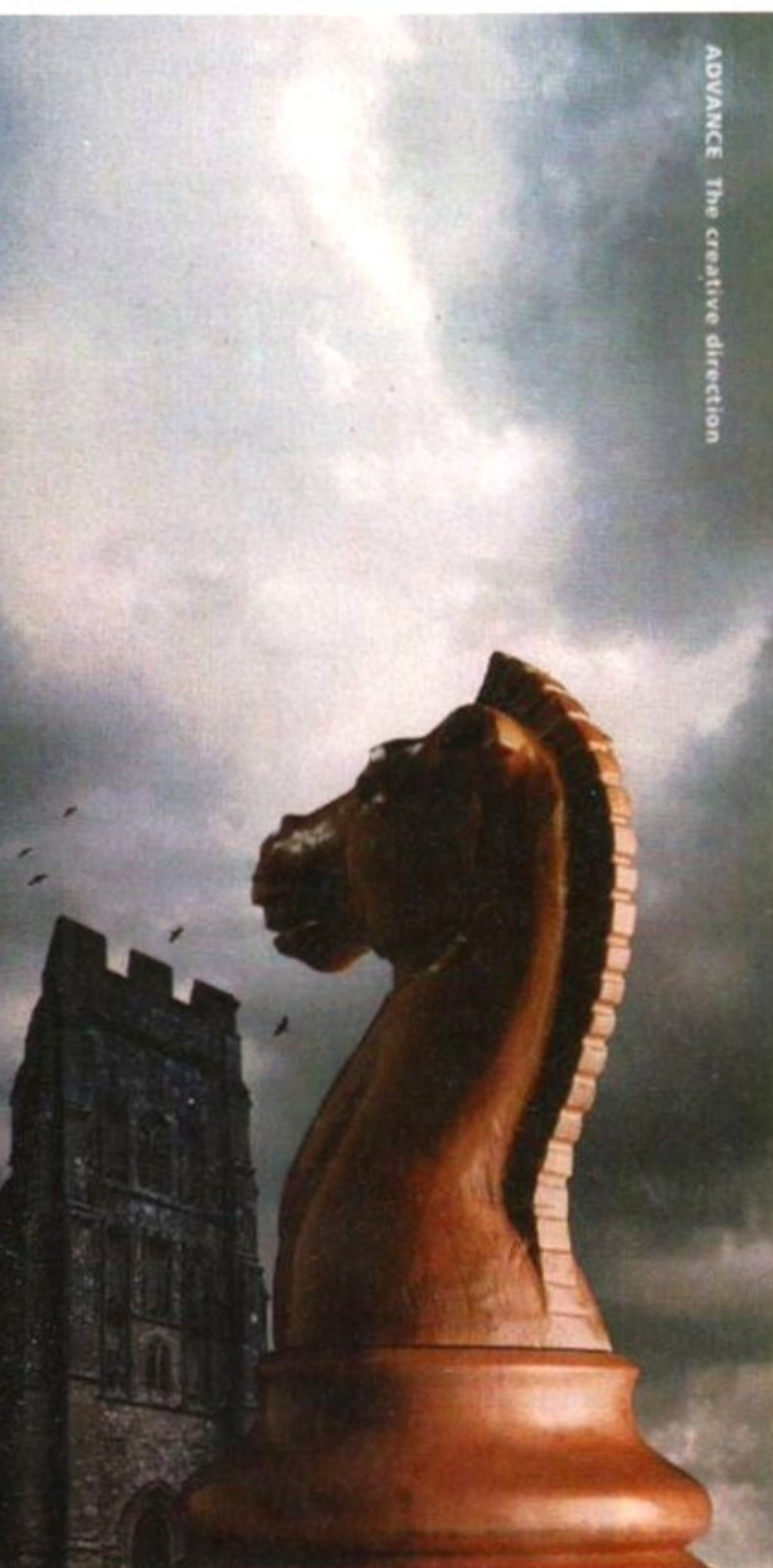


Short Feature "Prelude to Eden" by Michael Gagne.



Seeing is Believing...

CONTINUED



Parallax Advance.

such an impact on the Playstation and now do nothing for the Amiga.

Another company with a big stake in the animation world is US Animation, who have recently released Ink and Paint software version 3.1 for Silicon Graphics and Hewlett-Packard Workstations.

The US Animation production team produces hand-inked line maintaining all of the artists nuances. 2D animation can be integrated with live action or 3D images. The system has resolution independence so that the same image can be used in a variety of different media and formats.

Cambridge Animation systems have produced Animo, a 2D Animation system, and told AUI that Warner Bros. are taking 100 Animo licences for use in films. The system will be used to create 'The Quest', a new animated feature movie. 'The Quest' has been described as signalling the start of a whole new line of films with a completely new stable of characters,

and a wide range of animation styles.

Warner apparently intend to use Animo as the core to their future development of digital animation and, besides feature films, will use it for television series and interactive games development.

Animo's success has not been limited to the major Hollywood studios. In recent months, they say, systems have been installed throughout the world.

Parallax Software started in 1990 and they say "It's no surprise that people have tried to automate cartoon animation. After all there's so much dull, repetitive hard labour involved, hard labour that could be done by a machine. The only downside in the process is that by automating you may lose what made the old style cartoons from the traditional animator's graphic personality, the human touch."

Parallax Software assert that their paint system Matador offers painting, retouching, and rotoscoping at any stage, for multiple layers and clips. They also say they have never lost

sight of the basic idea, as what is important isn't just their technology, but what you can do with it.

The same, one hopes, might be said of all of the magic software and hardware tools that are emerging that make CAD/CAM, and in particular animation, such an exciting ground for development.

Mighty Morphing Here

Amazon, from Interactive Effects, is a paint system used for the Mighty Morphin Power Rangers. The system works by importing 3D models from SGI animation systems and applying the brush and image processing effects directly onto the surface. The results can be seen in real-time, as well as producing high quality proofs using Pixar's Photorealistic Renderman. With 3D paint you can load any number of 3D models and assign separate texture maps to each.

Mitsubishi's DiamondPro 17HX high performance monitor.

Amazon can be switched between 8 and 16 bit painting, and all 64-bits can be while in operation.

Prisms' 3D Animation software had a hand in creating the National Lottery television commercial - Lost in Space.

The trick was to make the hand look magical and organic, not threatening or too sci-fi.

The hand is seen as a mystical presence in the sky, sweeping over people and towns, determining the fate of lottery winners. The trick was to make the hand look magical and organic, not threatening or too sci-fi. It wouldn't have done to scare punters off, would it? Would anything scare off the avaricious public they have made us into, seeking to load our bank accounts down with a graphical £40 million or so?

Arty

Arty is a magic box full of visual tricks and effects for video and 3D animation sequences. Built around a powerful image processing engine, Arty enables users to create explosive and wild, or subtle and sophisticated, special effects by adding nodes to one another. All nodes come with pre-set attributes, but allow for customisation of any parameter. Arty has been designed for animated effects for TV post

production, multi-media games, and corporate video applications.

Explorer

Video Explorer, from Intelligent Resources, offers a video card for editing, compositing, animation, post production video tools, and character generation through the digital video engine.

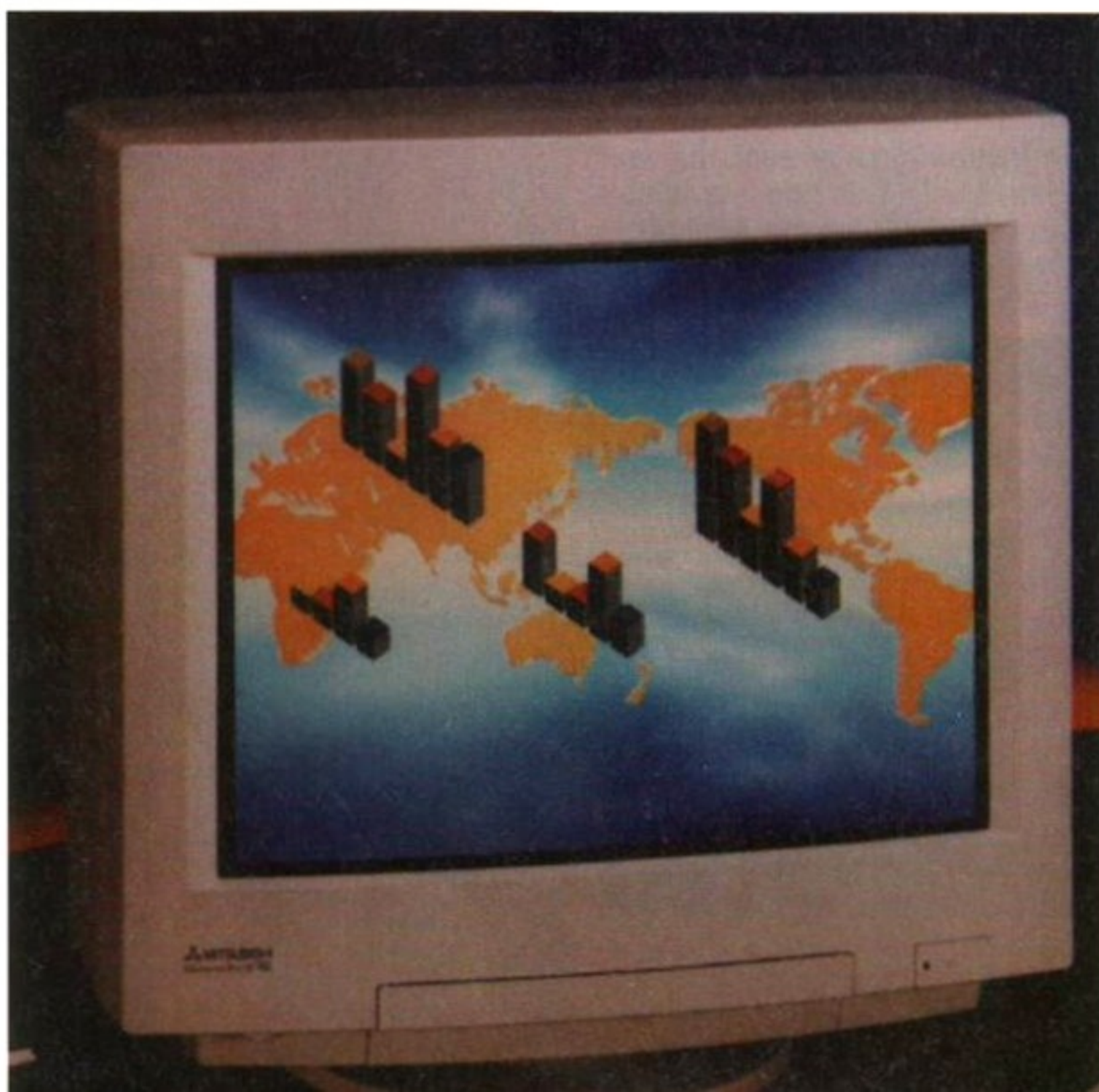
This real-time digitising device works with video cameras, high-end VTRs, RGB laser disc machines, and RGB monitors. Passive when in use, it gives the computer a second screen which, when using standard software, allows any image placed there to be output continuously as broadcast quality video.

Seeing IS Believing

For those who use computer graphics, the old fashioned 14 inch monitor won't do. The standard is now 17 inch and larger. So it's not surprising that we are seeing more high quality monitors arriving.

Mitsubishi launched at the Computer Graphics Show a 17" Auto-scanning monitor which costs £695, and is designed for multimedia graphics applications.

The NEC MultiSync XM37 and XP37 monitors are multimedia monitors specifically designed, say NEC, for presentation environments, such as corporate conference rooms and training facilities, trade shows, classrooms, and video-conferencing.



NEC Multimedia Monitor

MultiSync XM37 and XP37 Monitors



NEC's Multisync XP37 Multimedia monitor

In Pursuit of Realism

"The impact of 3D on the entertainment industry and PC market as a whole leads on to animation and visualisation," says Bill Boffin, Computer Graphics forum co-ordinator from the Computer Graphics Suppliers Association.

Before animated characters hit the PC or wide screen they have to be created so the viewer can believe that the image has human characteristics, even if the morph bears no relation to an actual body. He points out, for example, that few companies have developed realistic hair which moves in the right way. So how can you capture, store and manipulate what you see in a computer? How can you use a computer to simulate what you can't see but would like to?

The components of an image rely on the dots on screen which make up the pixels. The rate of change in the size of dots and colour of the dots holds the key to manipulation into complex images.

Compression is needed to contain these complex images. Most hard

Using MPEG and a low bit-rate link to a maritime communications satellite, television pictures were received around the world from a small boat in the middle of the ocean.

disks, even today with the massive and accelerating rise in ever cheaper storage, are too small to store large amounts of uncompressed data. And multimedia production simply could not take place without some degree of compression.

The aim of compression is therefore to cut down the data required to store images while maintaining the quality. For historical reasons, a CD-ROM stores around 650Mb. Only 540 frames of uncompressed PAL video would fit on a disk and it would take at least 15 minutes to get the pictures off again, real time play back would be impossible.

Just as ordinary CD-ROM, without compression, cannot play back fast enough to display full motion, full screen video, so too telephone cables and local area networks can only pass a restricted amount of data each second. Compression, however, puts 74 minutes of video onto a CD-ROM and allows the broadcast-level rate of 25 frames of video to be transmitted each second over copper wires intended for speech only.

Compress It!

One form of compression can be carried out by simply throwing away as much as possible of the still picture. This is done by using techniques like "Run Length encoding". This technique takes less data to tell the system to repeat a yellow dot 256 times than it does to transmit information about each dot on a line.

The Joint Photographic Experts Group, yes, it's that JPEG that Amiga users have become familiar with, drew up a specification based on the principle of dividing up a picture into blocks and looking for redundant information.

This standard was overtaken by a new development to play 25 compressed still images each second. This is the way M-JPEG works (Motion JPEG). This process pre-dates digital video compression.

Now, the generally accepted standard for compression is MPEG, called after the Motion Pictures Expert Group who developed

video compression that allows full screen, full motion, video at 25 frames per second - and using both software and hardware to achieve it.

Components of MPEG

Bob Auger of Electric Switch Ltd., an expert on the technique describes how it works. "The MPEG stream is made up of two layers. The system layer contains timing and other information needed to demultiplex the audio and video streams and to synchronise during playback... The compression layer includes the compressed audio and video streams... The system decoder extracts the timing from the MPEG stream and sends it to the other system components. The system decoder also demultiplexes the video and audio streams and sends each to the appropriate decoder... Much of the information in a picture does not vary in the next picture. MPEG sorts out the few changes to represent some pictures for their difference from the reference picture."

It is possible to generate MPEG-1 files at a data rate as high as 4 or 5 megabits per second.

The MPEG standard defines three types of pictures, intra, predicted, and bidirectional. Bob Auger comments "Intra or I-pictures are coded using only information present in the picture itself. Intra pictures provide random access points to compressed video data. Predicted pictures are coded with respect to the nearest previous Intra or Predicted picture. This technique is called "forward prediction".

MPEG

The MPEG standard has three elements - video, audio and system. The video element defines a syntax for compressed video, and gives the outlines of the techniques that can be used to compress video into that syntax. The audio element of the standard similarly defines a syntax for compressed audio and the system element a description which integrates the video and audio elements in a single data stream and provides the proper time-stamping for synchronisation.

it based on all previous compression techniques including motion estimation. This is where you know where an object is in frame one and where it is in frame 12 and you can predict the path from A to B with some certainty. Ah, if only all life were this simple!

The standard for MPEG has now been agreed by 80 representatives from Japan, 80 from the USA and 10 from each European country. All over the world we are seeing the increasing use of MPEG to provide computer-based

Predicted pictures provide more compression and serve as a reference for bi-directional pictures and future predicted pictures. Bidirectional pictures use both a past and future picture as a reference. This is called "bidirectional prediction"

"There are other compression techniques," Bob Auger points out, "such as Fractal stills (as seen in Microsoft Encarta) and Wavelet compression used in Indeo Interactive video from Intel (Indeo 4.1)."

One of the most striking demonstrations of the uses of compressed video recently was when Greenpeace sent back from the Pacific, video of their protest against the French nuclear tests in Mururoa. Using MPEG and a low bit-rate link to a maritime communications satellite, television pictures were received around the world from a small boat in the middle of the ocean.

The first standard, MPEG-1, is a system of scanning a TV picture using two fields. MPEG-1 solves the problem of interlace (Where the first by-line scan sweeps alternate line positions on the picture, the second sweeps the gaps between the first by discarding every other field before compression begins.) As a result, vertical resolution and motion portrayal performance are effectively. For consistency the horizontal resolution is also halved.

Bandwidth

The compressor starts with one quarter of the input bandwidth and so achieves a high compression factor. It is possible to generate MPEG-1 files at a data rate as high as 4 or 5 megabits per second, although the lower data rate of 1.5 Mbits/sec is designed to fit the bandwidth of CD-ROM, VideoCD and CD-i.

MPEG acceptance was rapid; the industry recognised it worked well and broadcasters realised, as did the MPEG working group itself, that if they upped the bit-rate and picture size, it would increase the channel efficiency of satellite transponders and cable networks.

The broadcast industry was not limited to CD bandwidths and was unwilling to settle for VHS resolution. At about the same time high-definition television (HDTV) promoters realised that they needed to pack more into their bandwidths

and looked for something which would compress video and audio over public switched telephone networks (PSTN). The result was MPEG-2.

All the "Video on Demand" trials around the world, including that being carried in the UK by BT, rely on MPEG-1 compression, but the digital TV announced by the Government will use MPEG-2 for normal and HDTV transmission.

The MPEG-2 standard is designed to represent 601-resolution video (740x480 NTSC, 704x576 PAL) at data rates of four to eight Mbits/sec. MPEG-2 supports interlace, 16:9 aspect ratio, multiple video channels in a single system stream, and "extensibility" to HDTV. It does not need to subsample before

compression because it does not attempt a high compression factor. Results have been good where the application is limited to the final delivery of material which has already been "post-produced" - in effect already compressed.

MPEG-1 is a subset of MPEG-2, so any MPEG-2 decoder will be able to decode MPEG-1 video. The video systems and audio parts of MPEG-2 all advanced to international status last year, though some extensions are still in progress. HDTV applications were to be covered by MPEG-3 but this was dropped because MPEG-1 and MPEG-2 worked very well for HDTV rate video.

MPEG-4

MPEG-4 has now been developed as an audiovisual coding standard allowing for interactivity, high compression and universal accessibility. It codes audio and video objects at their native resolution, then by selecting objects and scaling their resolution, a wide range of presentations can be made.

Many practical activities are already using MPEG as a way of making information available in an easily usable form. A Pan-European digital video broadcasting project is dedicated to getting MPEG on satellite transponders. The Norwegian company Saga Petroleum has been using MPEG on a PC-based Novell network to train North Sea oil workers, B-SKY-B uses MPEG video on CD-i to promote their satellite services. Levis' flagship store in Regent Street has

CD-i players running promotional clips with full motion video.

Peugeot, Volvo, and Daewoo use digital video as a sales tool in their car showrooms and Video CDs are widely available. We even review them, if they are about Star Trek in **AUI!**

And, of course, the holy grail for Amiga users, if they have a CD32, is that almost mythical cartridge that allows you to play VideoCDs

off that now no longer in production box. But even if that holy grail is appropriately elusive, help may be at hand, Video lovers. HiSoft are beavering away to produce a magic add-on that will let us plug in a Squirrel interface to a standard Amiga, plus CD-ROM drive, and see glorious MPEG. Who says the Amiga can't cut it even in the compressible MPEGed world? **AUI**

Computer Graphics Suppliers

Autodesk, Cross Lanes, Guildford, Surrey, GU1 1UJ Tel. 01483 303322.

Cambridge Animation Systems, 20 Cambridge Place, Cambridge CB2 1NR. Tel. 01223 311231.

Computer Aided Services, The Studio, Oldbury Business Centre, Oldbury Road, Cwmbran, Gwent. NP44 3JU. Tel. 01633 877770.

Creative Labs Inc., 1901 McCarthy Blvd., Milpitas CA 95035, USA. Tel. 800 998 5227.

Designlab, 22 Poland Street, Soho, London W1V 3DD Tel. 0171 437 5621.

ELSA Data Communications Computer Graphics, Sonnenweg 11, 52070 Aachen, Germany. Tel. 49 241 91770.

FAST Electronic UK Ltd., 235/239 Walmer Road, London W11 4EY Tel. 0171 2218024.

Intelligent Resources, 3030 Salt Creek Lane, Suite 100, Arlington Heights, IL. USA Tel. 708 670 9388.

Microsoft, One Microsoft Way, Redmond, WA 98052 6399 USA. Tel. 206 882 8080.

Mitsubishi Electric UK Ltd., Travellers Lane, Hatfield, Herts. AL10 8XB. Tel. 01707 276100.

NVision Inc., 222 W. Las Colinas Blvd., Suite 2030, Irving, Texas 75039 USA. Tel. 800 759 2110.

Oxford Metrics Ltd., 14, Minns Estate, West Way, Oxford, OX2 0JB. Tel. 01865 244656.

Parallax Software, 3 Soho Street, London W1 5FA. Tel. 0171 287 3626.

Premier Multimedia Ltd., The Foundry, 156 Blackfriars Road, London SE1 8EN. Tel. 0171 7217050.

Productivity Computer Solutions Ltd., The Willows, 80 Willow Walk, London, SE1 5SU. Tel. 0171 252 3009.

Red Box, Unit 5 Harley Industrial Park, Paxton Hill, St. Neots Cambs, PE19 4TA. Tel. 01480 405541.

Roderick Manhattan Group, 123 Disraeli Road, London SW15 2DZ. Tel. 0181 875 4444.

Side Effects (Prisms 3D Animation Software), 477 Richmond St. W. Suite 1001, Toronto, Ontario, Canada M5V 3E7. Tel. 416 504 9876.

Silicon Graphics Ltd., 1530 Arlington Business Park, Theale, Reading, Berkshire, RG7 4SB. Tel. 01734 257500.

USAnimation Inc., 818 North La Brea Avenue, Hollywood, CA. 90038 3341 Tel. 213 465 2200.

Visual Software (UK) Ltd., Westlands, 45, Merton Road, Bootle, Liverpool L20 7AP. Tel. 0151 933 8772.

YARC Systems Corp, 975 Business Centre Circle, Newbury Park, CA 91320 USA. Tel. 805 499 9444.

5D Ltd., (Arty) SBT, 90 London Road, London SE1 6LN. Tel. 0171 922 8814.



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Dr John Hemming, director of the Royal Geographical Society,
The Geographical Magazine October 1995.

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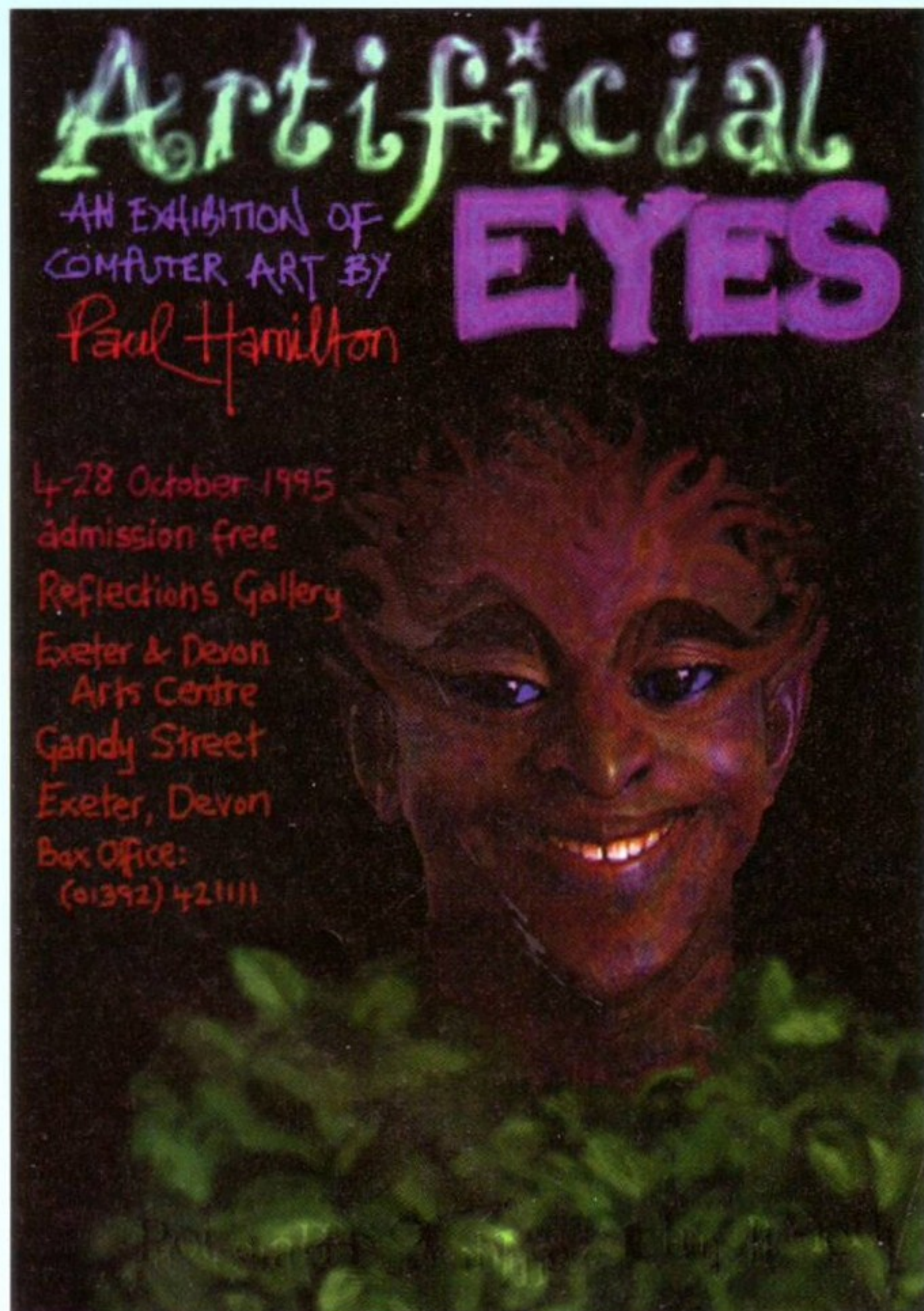
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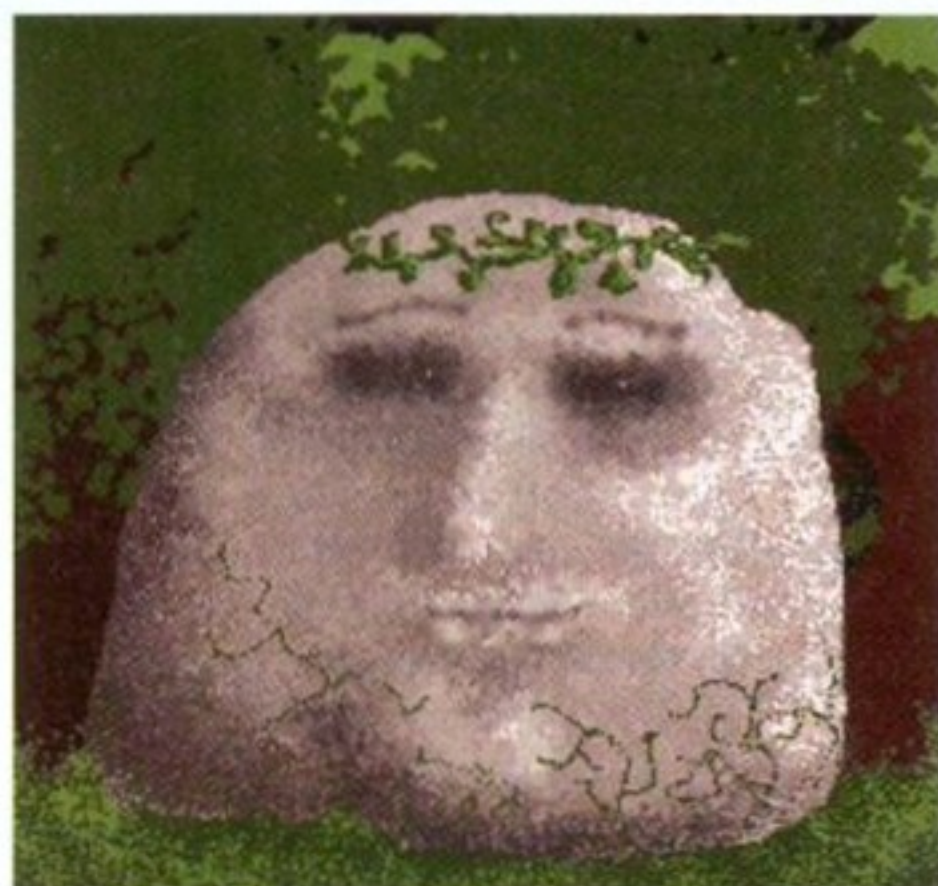
Computer



Paul Hamilton is a highly promising computer-based graphic artist using the Amiga, who recently held a successful exhibition of his work. He is to be featured in the forthcoming Encyclopaedia of Science Fiction and Fantasy Art from Titan Publishing. He will be sharing some 'trade secrets' in a new series starting in AUI next month.



Sparky.

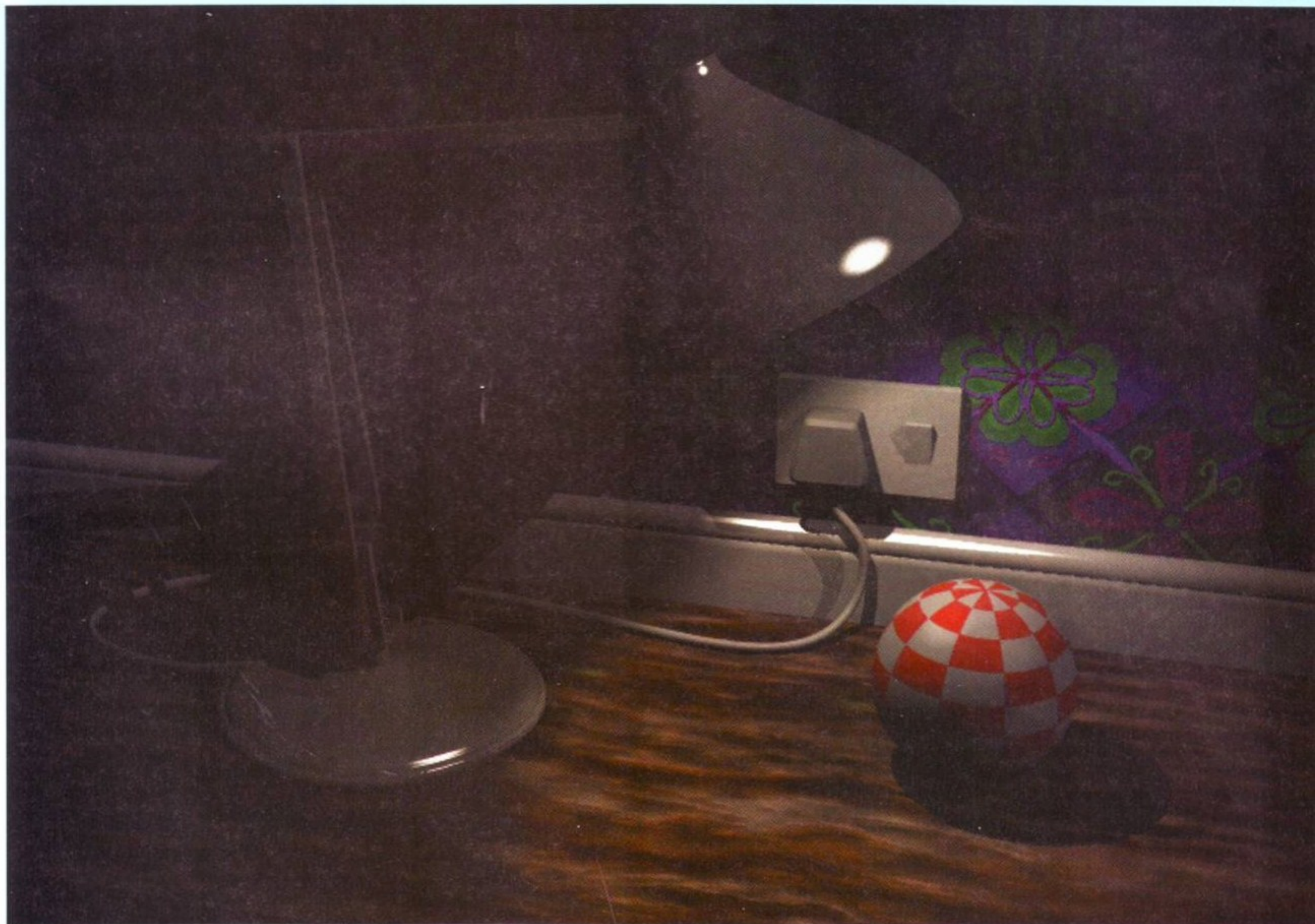


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It's a **Weird** **Wired** World

Phil Osborn reports on the highlights of two recent and major US shows which offer some signposts on the possible future of the Amiga.

As always, at the SIGGRAPH (Special Interest Group for Graphics) show at the Los Angeles Convention Center, tens of thousands of eager computer graphics professionals milled about among huge exhibits from almost every producer of graphics related software or hardware, together with all kinds of weird and wonderful projects from avant garde digital artistes or nerdy graduate students.

SIGGRAPH is a volunteer-operated organization. While the shows rival COMDEX in size and importance, it is often apparent that the

was one Amiga at the large NewTek pavilion. Otherwise, everything was SGI, PC, Mac, or Workstation. Oh well, maybe next year, when the '060 4000 tower is out, or the Power Amiga.

VideoPlace

Recently in **AUI** we have covered VideoPlace applications. There were three this year at SIGGRAPH. RealWare had a very nice virtual ping-pong game that people lined up to play. RealWare, which is PC/Matrox based, uses a single key-coloured glove or paddle as an X-Y trigger point. This enables them to do really fast, accurate VideoPlace, at the expense of limited interaction possibilities.

Vivid Effects had a game arcade enclosure. The only sort-of neat feature of their game is that the image of the player is miniaturized on the screen, and can fly around on it, based on which way the arms or body is oriented. (This is now available in CyberScape as well.) The game itself was really poor.

Some MIT graduate students had a true 3D VideoPlace system with virtual inhabitants that interacted with your image on the screen. This affair required one SGI Onyx computer plus another SGI system and a team of support personnel. I fooled around a little with

the virtual dog, but the interaction was very limited. Some clever coding could put a much better virtual environment than that on even an older Amiga model.

The real advantage to this industrial strength system was that it could allegedly discriminate your

image against any fixed background. Other VideoPlace systems, such as Vivid Effects Mandala, Tensor's CyberScape, or RealWare, require a custom, usually blank background, to do the edge detection of the incoming video. The MIT system demonstrated at SIGGRAPH still used a black backdrop.

At the IBM pavilion, a young woman informed me that she was looking for good products for OS/2. Being something of an OS/2 fan - hedging my bets against the future of the Amiga; at least IBM is making an honest effort to do WARP right - I proceeded to drag her around the show, introducing her to NewTek, showing her the VideoPlaces, and so on.

Since IBM had just transferred her from the Mainframe division, this was her first real introduction to what a personal computer could do (she had never heard of the Amiga!).

Virtuosity

On the second day, I ran into a group of VR enthusiasts, including Gregg Panos, producer of the Virtual Reality Source Book and a regular activist/producer/publisher in the L.A. graphics/VR scene. He took me to meet Brett Leonard who was celebrating the ending of the

was previewed for five or ten minutes - don't miss it! A lot of good stuff of this nature was evident throughout SIGGRAPH, but, of course, you see it every time you turn on your TV now. If you can afford the people and equipment, you can do just about anything on screen that you can conceive.

Toaster Conference

Strange how quickly things change. SIGGRAPH alternates between East and West Coast. Two years ago, in Anaheim in California, the Amiga was still a strong presence, and NewTek held a coming out party for their 800MIPS Screamer box at the MovieLand Wax Museum.

They planned for 500 attendees. They had food for 500, 500 plastic five foot tall blow-up dolls of the painting "The Scream", 500 little plastic hatchets that screamed when you chopped, and Will Wheaton (who plays Wesley Crusher in Star Trek:TNG), who worked for them as a programmer, to introduce the new machine and talk about the glorious revolution that NewTek was forging - bringing video production to the masses.

Three thousand people showed up. I was there, standing on tiptoe on the curb at the rear of the park-

Later I overheard Wheaton discussing the idea of flying the whole NewTek crew to Amsterdam that night on the NewTek jet to check out the bars.

production of the movie Virtuosity. I had seen the movie which has all the science right which is unusual in films of that kind.

At the SIGGRAPH movie show, I saw Steven Spielberg - or an amazing clone - standing outside, surveying the crowd. The new Disney Toy Story computer animation

ing lot. Later I overheard Wheaton discussing the idea of flying the whole NewTek crew to Amsterdam that night on the NewTek jet to check out the bars.

Perhaps that many attended the Video Toaster show in Universal City in four days. I only saw about 300 at the opening talk by Petro



NewTek's Tim Jenison, prefers DEC Alphas to a PowerPC-based Amiga.

high level of spontaneous creativity you would expect from a non-commercial show is matched by the spotty level of general organization. These shows are such tremendous fun you just have to take it as it comes.

Where was the Amiga? There

Tyschtschenko, of Amiga Technologies. The mood was reasonably upbeat and there were some excellent products shown on the exhibit floor, but this was the smallest Amiga conference I have ever attended, by far. With Petro Tyschtschenko's announcement of the Power Amiga came a negative note from Tim Jenison, President of NewTek - a somewhat reduced organization after the split-off to Play Co. headed up by his old colleague Paul Montgomery.

Jenison said he would have preferred a DEC Alpha based system, it seems, as the NewTek code will not run and the Toaster will not work on a PowerPC based Amiga. He mentioned no plans to port over.

Most of the video professionals attending with whom I spoke seemed to agree that the future was with the PC and the stand-alone Toaster-Flyer box. They predicted that next year's conference would be mainly PC products - and perhaps not from NewTek either, as Play's Infin-

ity is supposed to be coming along quite nicely. If the features' list is accurate, then it could blow the current NewTek offerings out of the water. Infinity is said to be going to offer a complete editing studio in a box, including a professional sound studio.

Jenison has not abandoned the Amiga, nor lost his love for it by any stretch of imagination. He gave a talk following AT's Petro Tyschtschenko's in which most of his time was spent in eulogy of Jay Miner and the original Amiga development team. These people were and are his heroes.

Although the Amiga still has the only fully realtime effects, using the original Toaster, the near-realtime rendered effects provided by a fast

Infinitely better?

Mike Nelson's favourite computer person, the beautiful Kiki (Legs) Stockhammer and Marc Randal, both ex-NewTek, were the featured guests on a local talk/interview radio show in December, 1995 in L.A. I called in to ask Marc Randal if the Infinity supported VideoPlace capability. He stated that not only did it support it, but that it integrated video input control. For example, the Infinity can, it is claimed, be programmed to follow an actor and automatically digitally correct the position and/or size on screen to match whatever criteria are desired, such as keeping properly positioned and sized for the background video track being composited with the image. The kind of tricks done on every episode of Babylon 5, where entire sets are digitally rendered on the Toaster or the stand-alone LightWave, and then the actors act out the scene against a Blue Screen, still require a lot of care and tweaking to get actor and set to sync properly. Imagine Commander Sinclair grasping for the controls of the fighter and reaching right through them as though they were a hologram! Infinity, if it lives up to the claims made for it, should make virtual sets much easier to handle.



Amiga Technologies' Petro Tyschtschenko, keynote speaker at the smallest Amiga conference.

Pentium-Windows NT (or even Windows 95) Toaster-Flyer system are much higher quality and most of the professionals seemed to prefer them. These various factors imply that the U.S. market for new Amiga 4000s, which is mostly Toaster users, will soon fade, although the '060 4000 could breathe some temporary life back into it. From NewTek, expect continued development on both fronts for the present, with some VR-style effects and tools appearing.

Lack of interest

There were thirty or so companies exhibiting at Toaster Conference, but I didn't spot anything that hasn't probably been reviewed extensively elsewhere. DRACO was there, for example. "Weird TV" people seemed to be everywhere. (This largely Toaster-based television programme sets the standard for weirdness - truly. If you're in the L.A. area, check the late-night Saturday listings. Best if experienced on drugs, I'm told, although I wonder how you would tell the difference...).

The exhibitors seemed happy with the attendance at the conference. The one general Amiga products source was doing a great business especially on the final afternoon, when their printer ran out of paper and they had to write out duplicate invoices for every purchase by hand.

What about the Power Amiga? If ESCOM can work the right deal with IBM and Apple, they could come out with the machine that neither IBM nor Apple was able to deliver - the true cross-platform, multi-platform system. A machine that ran OS/2, the Mac System 7.7 or 8, plus Amiga OS could make a very strong showing. This machine might possibly find a very

CONTINUED

good professional market in Europe, but it's going to be difficult for any system to go up against Intel and Microsoft in the U.S. - at least for the next few years.

It will be interesting to see if the U.S. professional community takes notice. For years they pretended the Amiga, and then the Toaster,

Unless the Amiga comes out with something radically better, not just substantially better, it will not recapture any significant portion of the U.S. market. The PC - even a very fast Pentium PC - simply cannot support a lot of the multitasking that we Amigans take for granted on our little home systems. Europe

tion between measures of general social honesty and economic performance - that has been getting a lot of press - Trust, by Francis Fukuyama. You may remember that he gained lots of publicity from his previous book in which he predicated "the death of history".

projected set-top boxes, will probably eventually be produced by Tianjin, although it may take them a while to achieve the capability to

The one general Amiga products source was doing a great business especially on the final afternoon.



The beautiful Kiki Stockhammer at a previous U.S. show.

didn't exist. This made a very large amount of money for those people who knew better or learned better - such as Spielberg.

Adobe Magazine ran a piece by the head editor in the most recent issue, in which he discussed the changing Mac market, now that Mac clones suddenly exist. I left a phone message for him asking why he didn't mention the Mac clones that have existed since the late 80s in the form of excellent emulators on the Amiga (and also even on the Atari ST). Apple, of course, does not like to hear about these non-authorized products, and Adobe doubtless likes to stay on good terms with Apple.

There is a very strong anti-Microsoft sentiment in the U.S. computer community, and several computer gurus have come forward in print in recent weeks to predict that eventually any closed, proprietary system - such as Windows net software or IBM's Lotus Notes or Adobe's Acrobat - will fall before the need for universal open architecture on the Net. Before that happens, there may be a real battle royale as Microsoft attempts to grab the lot.

may be a different story. OS/2 has reportedly done very well in Germany, especially - as has the Amiga, of course.

Eastern Opportunities

A few months back, the Orange County Register newspaper ran a little piece showing a chart of levels of corruption by nation. The source was World Watch Institute, which had compiled the data from surveys done by professional business organizations. Only countries from which at least two reliable surveys were available were listed. Of those 45 countries, Indonesia came in worst and New Zealand best. China was second worst, with Singapore second best. The first thing that I noticed was that, to the best of my knowledge, the ranking precisely matched the percentage of Amigas per country, if you considered only the countries in which the Amiga was actively marketed.

I remarked on this correlation to a co-worker who specializes in export. He mentioned that there is a book on this subject - the correla-

If Tainjin Family-Used Computers does successfully produce and market the Amiga and Amiga-derived products such as set-top boxes in Asia, the CIS and Eastern Europe, as Amiga Technologies suggested at Toaster Conference, then it may be crucial for the general Amiga market suppliers to understand the problems inherent in the Chinese business market along with the amazing opportunities!

To that end, I most strongly recommend Fukuyama's book to anyone who produces or markets an Amiga product. As Fukuyama says, China is what is known in economics as a "low trust" society - a VERY low trust society.

At the Toaster Show, I asked Petro Tyschtschenko of Amiga Technologies about the widely reported deal with China's Tianjin Family-Used Computers. He informed me that they have exclusive rights to distribution of all Amiga products in China - backed by law - and exclusive rights to distribution of Amigas in several other major areas of the world - whenever they manage to get tooled up and into actual production. The entire Amiga line, including the CD32 and

build the high-end systems, such as the 4000 Tower or the coming Power Amiga.

But what about the reported plans to flood China, the Third World, and Eastern Europe with the Commodore 64 manufactured by Tianjin? He informed me that these reports were false. The possibility of remanufacturing the C64 had been discussed, and rejected based on the joint evaluation that there was no likely market for such an antiquated machine.

You will realise from what is here reported of what was at both SIGGRAPH and the Toaster Conference, the increasing use of computing in areas such as video and graphics is unstoppable and accelerating. Whether the Amiga can regain its position at the leading edge of that advance, in competition with the high end machines and even the PC, depends on if Amiga Technologies can update the Amiga quickly and powerfully enough to persuade developers and users to revive their presently waning faith in the Amiga. **AUI**

Gremlins - Not of the Movie Kind

We must apologise to Phil Osborn and Michael Hanish, both of whom report on USA happenings for **AUI**. Two recent articles, the VR Show report from **AUI** January, and the Opinion Column which appeared in **AUI** February were attributed to Michael Hanish when they were written by and should have appeared under the by-line of Phil Osborn. We offer sincere apologies to both for the errors in attribution and any confusion it may have caused among their separate admirers.

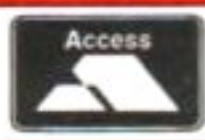
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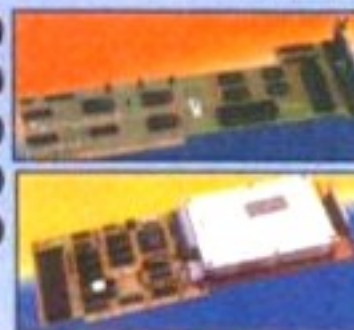
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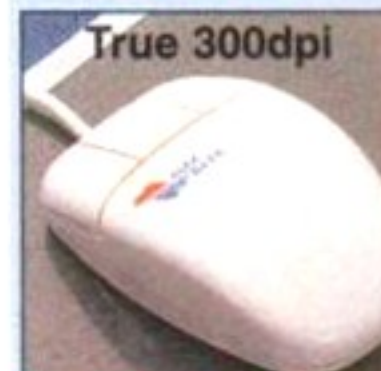
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Splashing Out

Wil Mobberley makes a big splash with particles as he shows how he recreated the famous Dambusters' raid for a forthcoming TV documentary.

When Group Captain Guy Gibson and the courageous members of 617 Squadron carried out their legendary World War 2 Dambusting raids on the Ruhr Valley dams, they didn't record the event very well. They cannot be blamed for that. They had the little matter of

German flak trying to blow them out of the sky and a host of other things to think about like altitude, approach runs, and timing, which rather ruled out aesthetically lighting each other's aircraft and the general scene so that they could get a nice bit of film footage showing the bouncing bomb in action.

While this may not have been good for recorded history, it was good for me because a forthcoming documentary series wanted to demonstrate what happened. So, in the absence of film of the real thing I was asked to produce some computer animation. The brief didn't call for it to be photo-realistic. In fact, for documentaries too much detail can sometimes get in the way. What was required was an animated diagram which nevertheless would fit in and not clash too much with the rest of the programme's archive footage and stills.

Airfix

Building the Lancaster Bomber model was simple enough. I used skinning, sometimes called loafing, for the fuselage. (This caused much merriment when my clients asked for a run-down on how I would approach the job, and I told them that one of my favoured techniques is loafing!) I used the plans

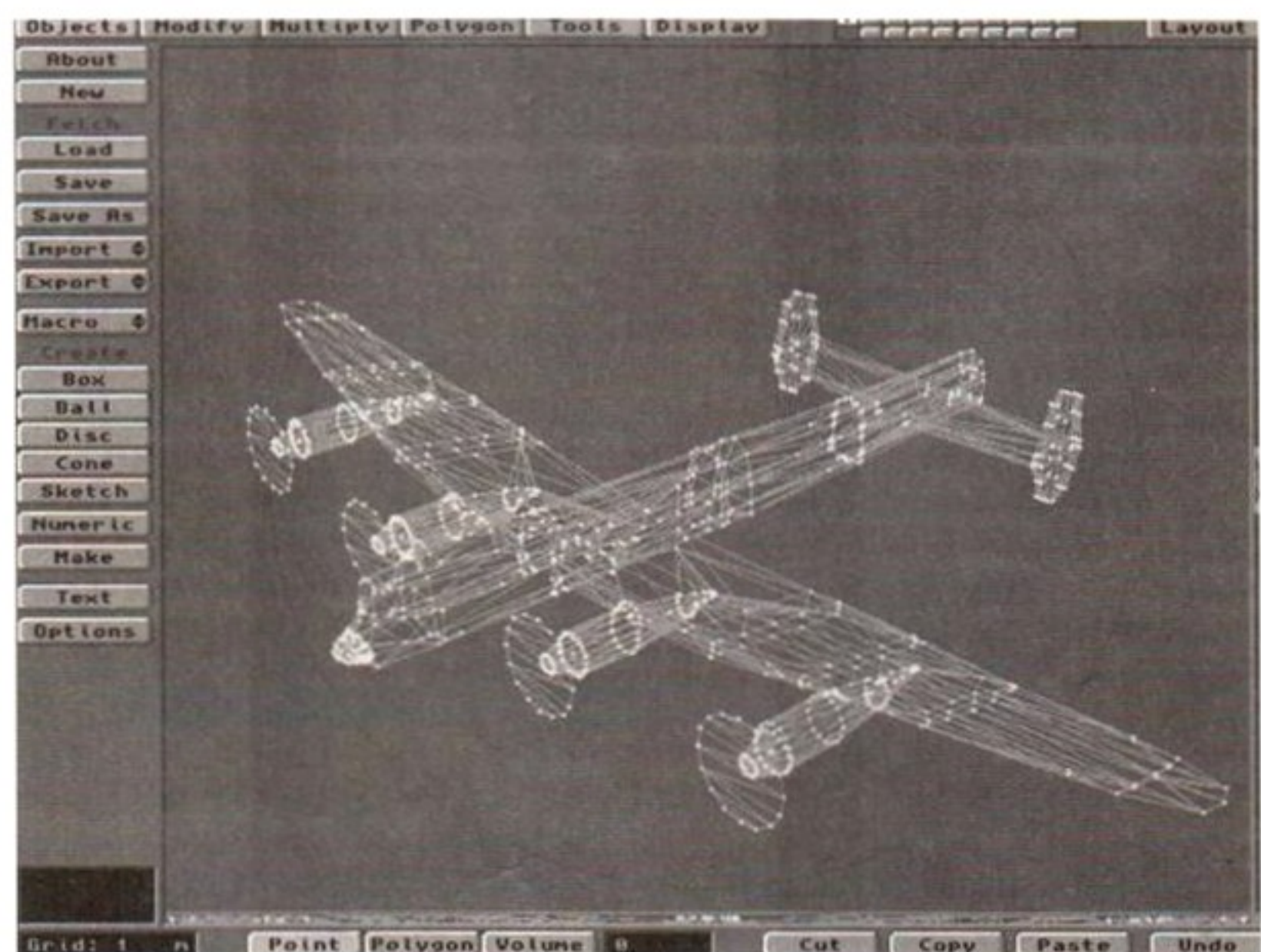
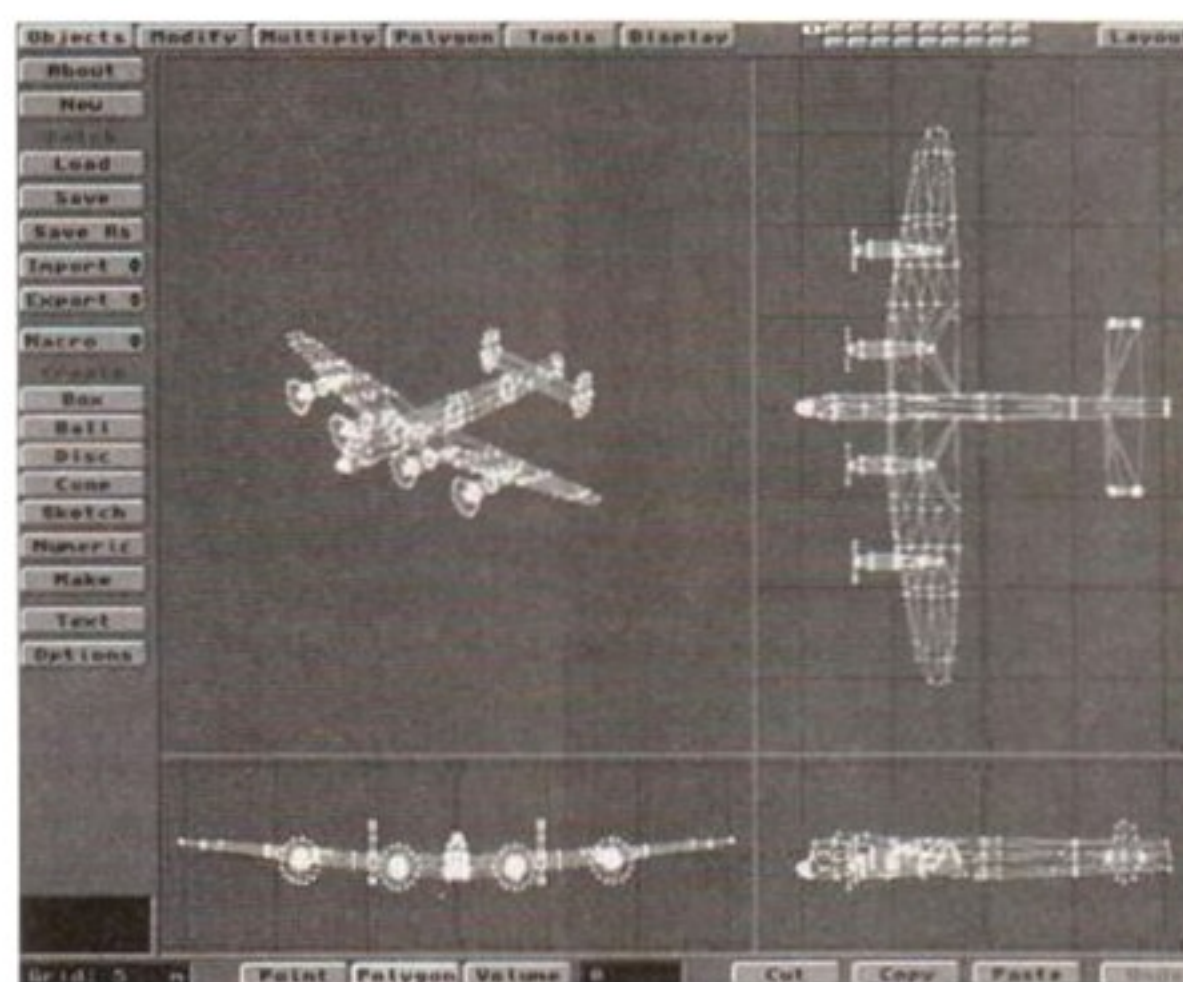
from a model kit for the dimensions and simplified the structure.

Everybody approaches jobs in different ways. I tend to use deform tools a lot, but this can result in non-planar polygons. When these are subsequently tripled, the polygons will sometimes flip, and it is time-consuming to go through and find them. Don't believe that Align is always enough. Sometimes it isn't.

My preferred way of working when I'm rushed is to triple every-

thing before I deform it because I have less trouble with the polys. Given time, it is better to take the more meticulous approach and end up with fewer polygons to save on rendering. Those triangles on the transparent propeller planes are hardly necessary, for example, but I tripled them because I was deforming the whole engine block, bending and stretching the aircraft. I could get away with all the extra polys because the plane is never seen very close to the camera.

Make no mistake, however, if the plane were to come very close to the camera I'd need to merge a load of polygons together. 3D work is always a compromise between what is quickest, what is ideal, and above all, what works. (Consider bones. These deform an object at the animation stage and four point polygons can easily deform into non-planar ones. This is a circumstance where you have to triple all polygons whether you like it or not.)



Terrain

The animated sequence was to be used to illustrate more than one raid. Fortunately, the approach runs were similar, a low altitude sweep over a peninsula with a turn to face the target dam. For the lake and surrounding area I built a generic version, detailed enough to be recognisable, but lacking the fine details of buildings and trees. I texture mapped the whole thing and added a bit of bump mapping as well. I ray traced the reflections for the establishing shot, but not for the bouncing bomb sequence because the results would not have been anything like as clear if a reflected bomb kept rising to meet the real one at each impact point.

Having raved for so long about Lightwave you would think that it has no faults at all, but everything in the garden isn't always rosy. The feature which irritates me most is the camera target function. As you are probably aware, you can set the camera to look at a certain object and thereafter the camera follows it wherever you move that object.

Unfortunately if you make a key frame for the camera while target has been set, and subsequently turn the target off, the camera will

the impact, whereas the beginning of the shot was wide angle and pointing the other direction. Add to this a cushion on the camera move (don't you just hate sudden juddering stops?) and the result was a choreography nightmare. The parallax effect gave the impression the bomb was travelling faster than the plane, even though this was not the case, and over-tweaking it gave the impression the plane was suddenly travelling backwards. Or that the bomb was accelerating. None of which was happening on the motion graphs!

There was a great deal of trial and error, but eventually I got it to look right by making it wrong. The bomb actually travels in a slightly curved path. This is not apparent because the camera is on the move and there is insufficient frame of reference to show it.

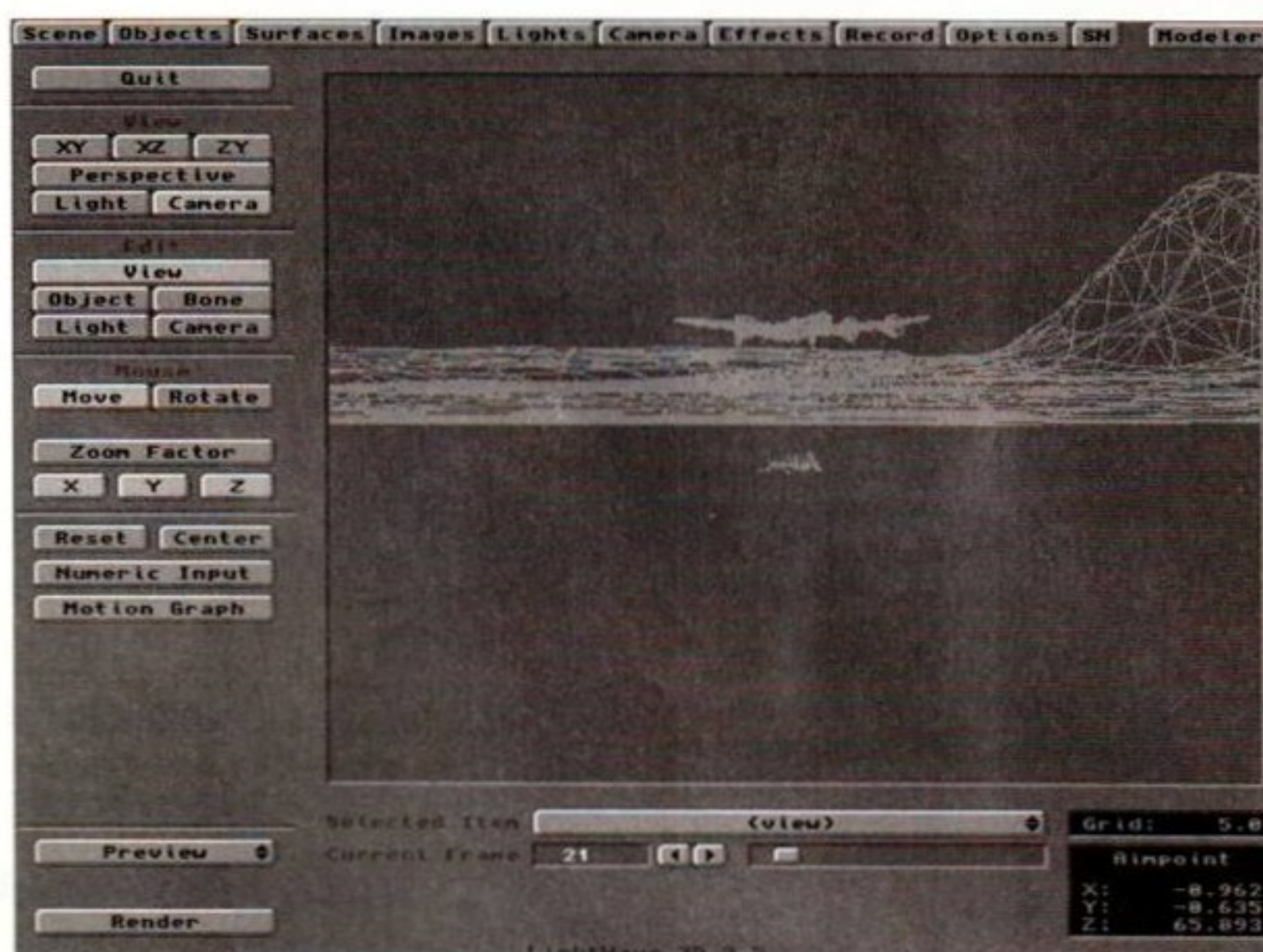
The biggest problem was the splash of the bomb hitting and bouncing on the water. My initial plan was to build a texture-mapped model and use object morphing. Simple in theory, but in practice it looked so odd. I had to resort to a different approach - particles.

Particles

When I first read about particles in 3-D programs I had the notion that they would be used for things like rain and snow. Sure, they are legitimate applications, but I hadn't realised that they could be used for things like fire and water as well. Assuming you used enough of them and could afford the rendering time. (Maybe it's time to buy one of those particle operator add-ons...) I built a cube, subdivided

it, and then went berserk deforming it using pole, bend, and taper until I had something which looked vaguely like a splash shape. Then I used the macro tool 'points2polys' which made each point a single particle object. (This is not to be confused with 'kill polys' which removes polygons, but just leaves points which will not render.)

I assigned a texture to the points which I called "splash", and in layout I made this a blueish white. Then I used scale to make my splash object minute, key framing it to enlarge very quickly at each impact point, only to sink



beneath the level of the lake. I also made a transparency graph to help with the disappearing 'surf'.

lection of lines. To my surprise they rendered pretty quickly as well.

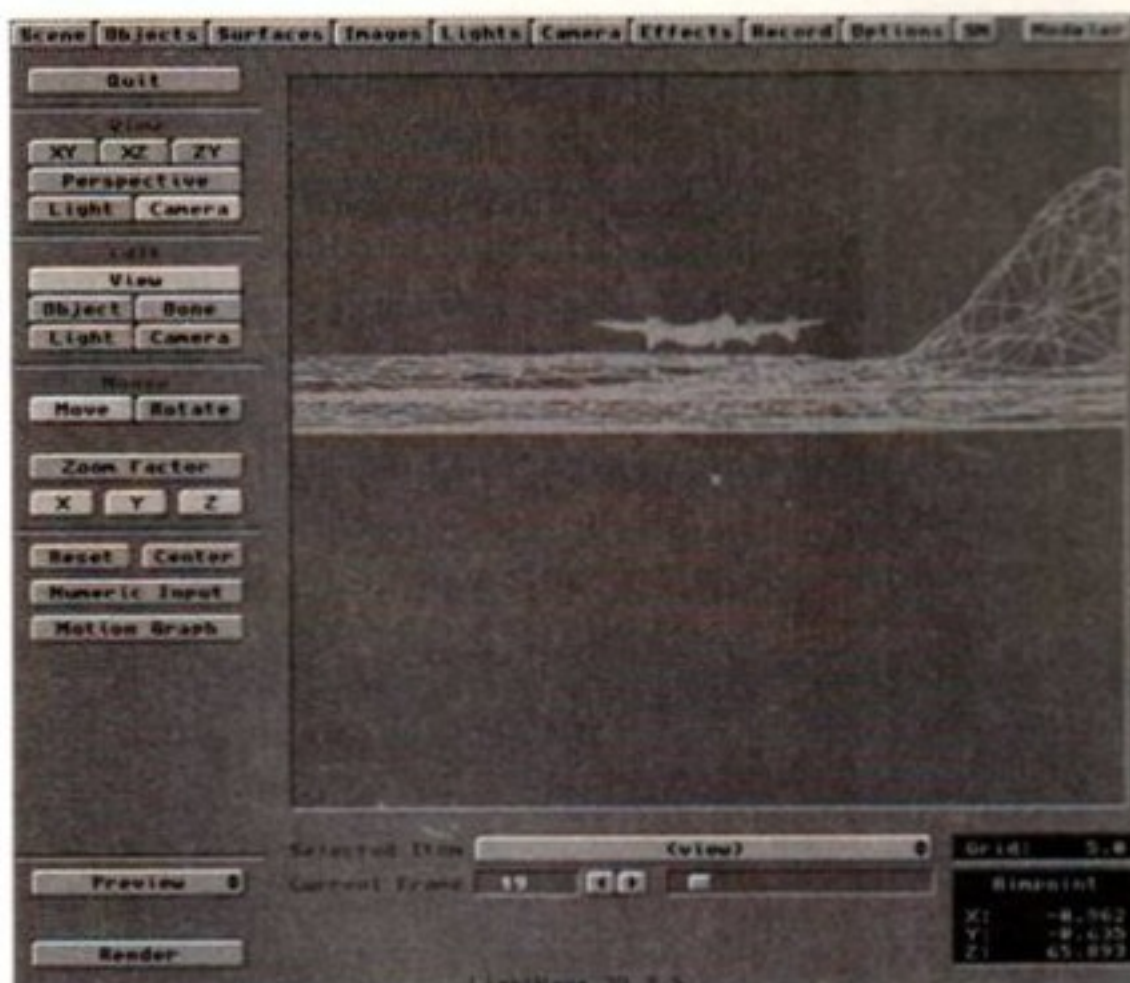
Explosive Result

When rendering I turned on particle blur and, as you can see from the screen shots, the result works. The fact that the points are key-framed means that each line has a smooth trajectory and the particle width, coupled with number of points, makes the splash look solid rather than what it really is - a col-

Fortunately my clients didn't require any animation of the dam being breached. Merely of an underwater explosion for which I used a lens flare. The bouncing bomb was actually a depth charge you see. It exploded underwater against the wall of the dam and the force of the water magnified the effect of the blast.

I'll have to remember that next time I'm in the bath. That's all for now, have fun with particles.

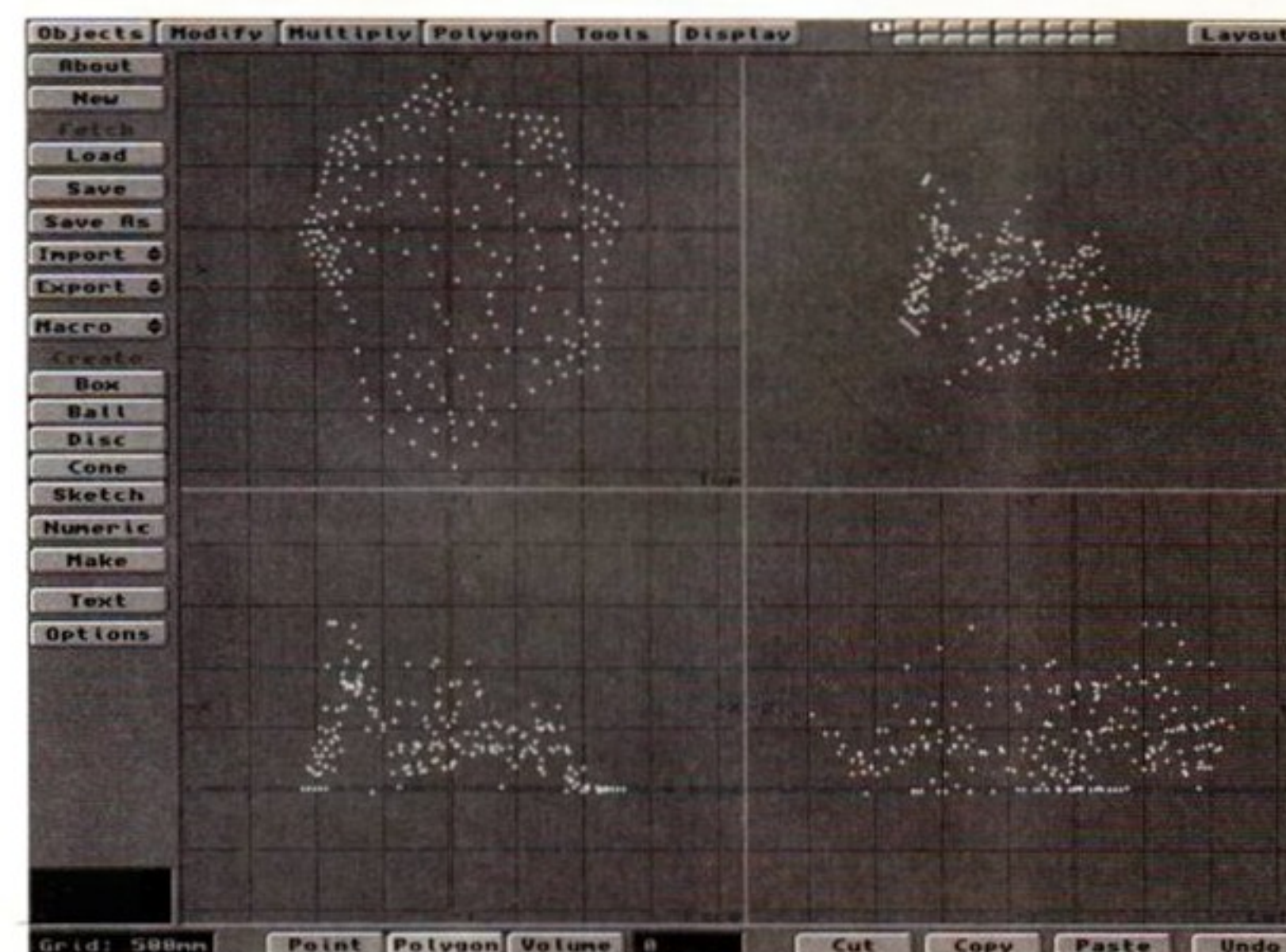
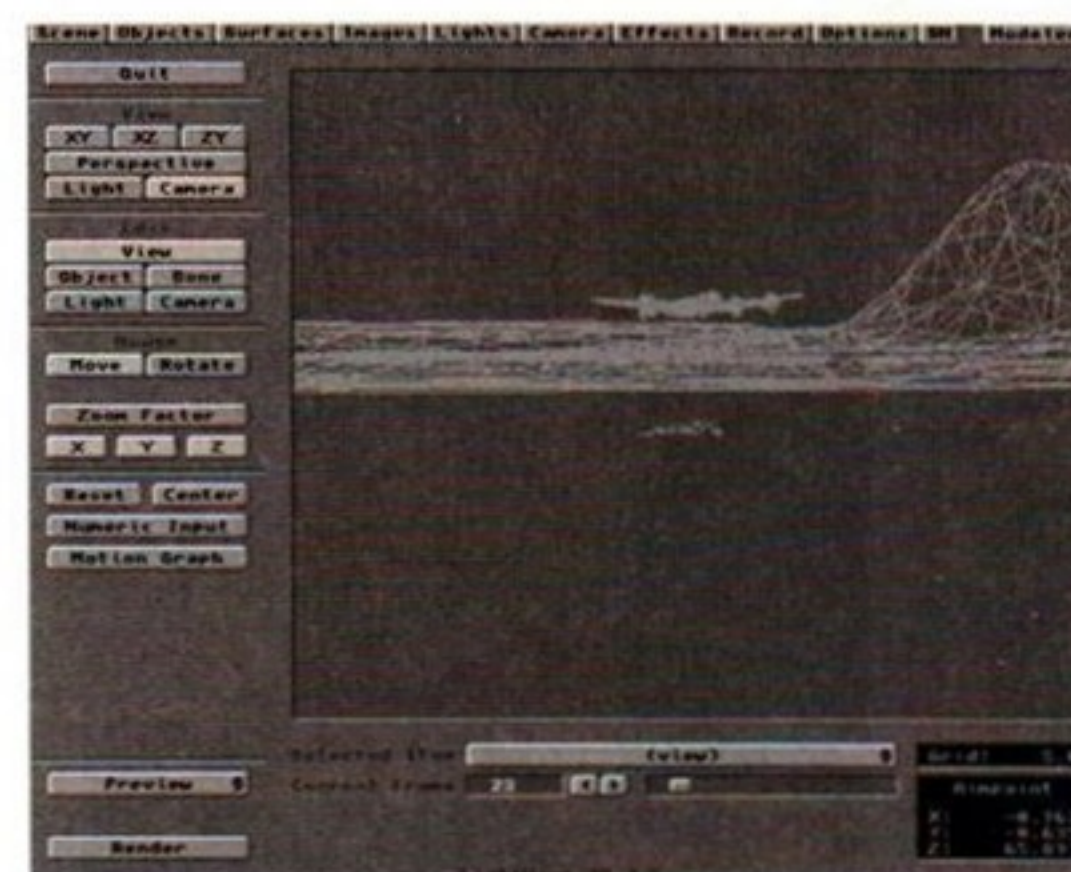
Special thanks to Nugus Martin Productions for permission to use the pictures. **AUI**



revert to its original heading. This can be very infuriating because there are many occasions when I want to follow an object for a while and then leave it behind. Doing it by hand is rarely as smooth as following automatically, but there is no interaction between the two. It's one thing or the other.

Choreography

This caused me problems because, at the end of the shot, I was zooming into the dam to show





Many years ago, the late and somewhat notorious 1960's financial wheeler-dealer, Bernie Cornfeld, said, "If you want to get rich, don't horse around with steel or lightbulbs, get into the money business." Cornfeld, who knew a good proposition when he saw one - and that included Victoria Principal when she was just a luscious starlet - made and lost huge fortunes using that formula. He even started a bank which is a good way to get into the money business as the profits of the UK's high street moneylenders show.

However, in the famous phrase so beloved of the Witton clan, that was then and this is now. Today, the money business, as Cornfeld defined it, doesn't compare to contemporary equivalents of steel and lightbulbs. For example, two obvious ways of raking in the cash have shown many signs of being far superior in generating large amounts of the green stuff than anything in the money business except printing the watermarked paper itself. Those two are biogenetics and technology, neither of which really took a leading role in the business in Cornfeld's time.

Leaving biogenetics to nature magazines

Anthony Mael gets into cyberspace and brings back the news and views of the online world.

spondulicks fest is Netscape. You may remember that Netscape, which provides Navigator browsers for PC netusers, was founded just over a couple of years ago by a 23 year old programmer, Marc Andreessen, and a sharp-eyed entrepreneur financier partner. They made their stock market debut last year putting a price of \$28 on their shares. The Bernie Cornfelds of Wall Street sniffing a honeypot poured in their cash and the shares leapt to \$200 in quicktime, sorry, that's an Apple product, very fast indeed.

The real turnover of Netscape was peanuts compared to its stock market value. It was all seemingly fashion and future, but it wasn't just hype. Netscape have reported their financial results and they are beginning to look as if money can be made in the Online business. Although not in the quantities that would justify the exaggerated price of Netscape shares, which are now at around the \$160 mark.

As a sign of the Online times, Netscape reported that in the fourth quarter of its 1995 year, it took in some \$40 million - about £25 million -

which is just short of double what it turned over in the previous quarter. However, the best judgement of its growth is that in same period a year ago, it put in its bank account just \$1.2 million. Some jump over the Net.

The total year's turnover was a little over \$80 million - on which it didn't make any profit at all, but lost \$3.4 million. Building on that "success", it has just bought two other electronics firms, Collabra Software, another Internet company, for \$2 million and InSoft (Who they?) for \$160 million. The idea of buying these companies and their products is apparently to incorporate telephony, video conferencing, and other audio/video applications in future versions of Netscape's browsers.

Netscape's figures probably remind you more of Monopoly than real life. A company whose record so far is of nothing but losses, finds investors mad to buy its shares, snaps up other companies for millions, is now worth, give or take a hundred million or so, a couple of billion dollars. Bernie Cornfeld must be revolving in his Californian grave at what he missed.

Tuning In

It may appeal to keen computer users to sit and chat around the globe with other "early adopters", and the business world, which is always hungry for potential gold mines and may think the Internet is going to be one, but can you really see the average TV watching couch pota-

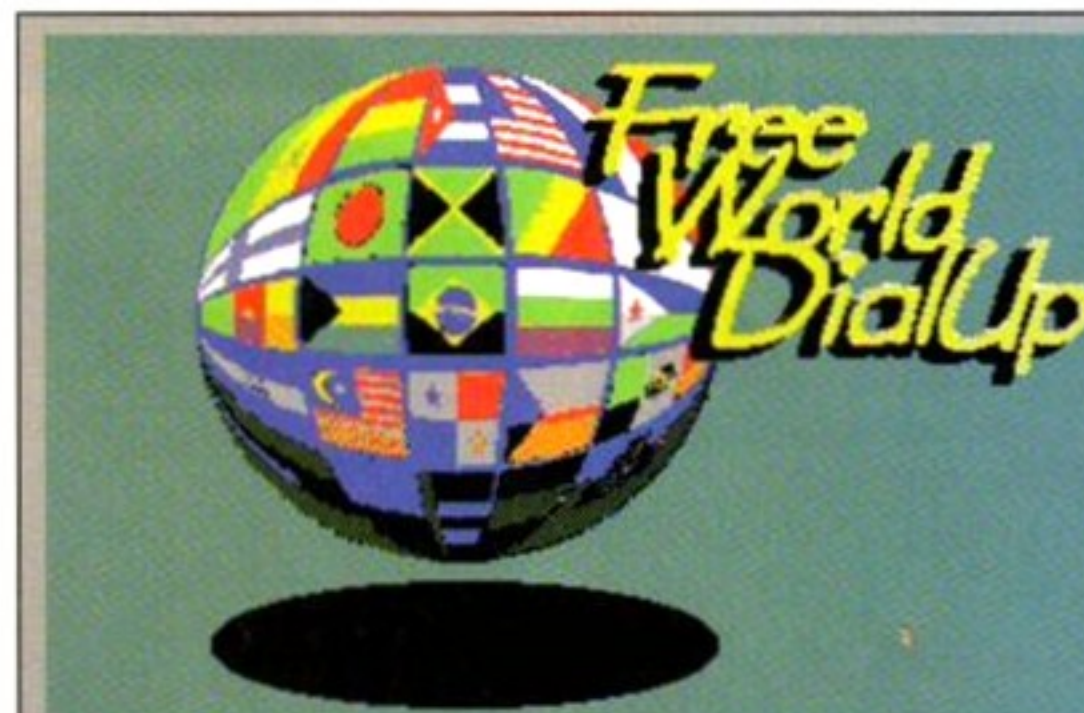
Truly amazing - yes, that overworked word is the right one for this - amazing mountains of cash flow volcanically over all aspects of electronics.

and the Financial Times, we must admit that truly amazing - yes, that overworked word is the right one for this - amazing mountains of cash flow volcanically over all aspects of electronics. In the NewsFile pages of **AUI**, we often report on the mercurial results of companies involved in this world of microwonders. One day Apple, for example, will be sloshing out money as if it had a lake of it and then shortly, it's Apple for the chop as profits disappear. And the sums involved are enormous, generally in billions.

Killings

The biggest killings these days are made in multimedia and above all, the Internet. Both of which, until recently, were areas in which plenty of money had been invested but very little profit made, except by the smart, in early, out quick money.

The epitome of this pie-in-the-online-sky



Free World Dialup

Launch Date: November 25, 1995

Monitor the state of the FWD Global Server Network by clicking [here](#).

Note: New FWD Client and Server will be released shortly

The new FWD Client is not compatible with the older FWD 1.x server. If you have the older client you can continue to use it with the existing FWD servers. When released, you will be able to monitor the state of the Global Server Network (GSN) on a real-time basis. The Beta 2.0 software also supports the iPhone API. As additional VON products publish their API's you can look forward to the FWD Client/Server to support them as well.

Really cheap phone calls for all?

to - the horror-flick fan, the football hooligan, the Coronation Street viewing, baby-holding young mother, the apron-clad, or perhaps glamorous, granny, even the everyday worked off the feet, information-drowned businessperson, tuning in to the Internet and dropping out of the rest of life for sufficient time and in sufficient numbers to make the billion plus dollar price tag of these companies justified?

Maybe it makes me a new old fogey, but I can't. Yes, the Internet is to be taken seriously. Yes, the Online world is growing fast. Yes, this exciting form of interactive communication will take an increasing role in many areas of life but no, it won't take the world over as has the telephone, the transistor radio, or TV. At least in the foreseeable future, say, the next twenty years or so. And it could need that kind of world acceptance to justify the ballooning values placed on these electronic mirage companies.

I may be wrong, but I don't think the dividends of shares in companies such as Netscape can possibly reach the levels to repay the investments that have taken their apparent corporate worth up into the billions. The whole thing with its up like rocket share price luring the unwary into parting with their hard-earned readies looks too much like the kind of illusory money business scam that Bernie Cornfeld would have delighted in.

I think those who have bought Netscape and other companies' shares at inflated prices are going to rue it and lose their electronic shirts. So, if you're thinking of investing a million or two in those "hot" shares at their barmy prices, don't. There, that's the Online Column financial tip for this month. It could save you a fortune - or lose you one, of course.

Movable Money

While Netscape's cash flows around like monsoon rain, one of the troubles for businesses is that if they want to get involved in the online world, money will have, in some way, to pass over the Net. The providers of software are having a hard time making the transmission of cash properly secure so

that if you buy something and key in your credit card number, it won't be grabbable by some less than honest character who would like to have you pay his - or her - bills on your credit card account.

However, help is at hand for those who want to shop till they drop on the Internet. Visa International and MasterCard International - Barclaycard and Access to us - have agreed to collaborate

in creating a system to ensure security of credit card transactions on the Internet, and their collaboration is expected to accelerate the development of electronic commerce.

By agreeing to a single standard the two organisations have solved a problem that came late last year when they independently announced differing

ways of processing credit card payments over the Internet. Until now Visa have been working with Microsoft, and MasterCard linked up with Netscape - yes it's that company again, but now the two credit giants have agreed to join up in the search for the Holy Grail, a single secure transmission standard.

They claim that they have found it in a system called SET, Secure Electronic Transactions - or they claim they will have by the time you read this. They say that they will make the software code freely available. They then intend to conduct separate tests with users, merchants, and financial institutions followed by a joint test.

Freely available security software? Surely, no pun intended, that's what my friend Victoria calls a "poxy moron", a contradiction in terms. It is difficult to imagine that with the skilled, demonically-driven crackers out there in the world that they won't immediately set - also no pun intended - out to break into the code ASAP and almost certainly succeed. After all, as was reported in **AUI** recently, a French group cracked Netscape's new version of Navigator in short order.

There are plenty of fraudulent transactions in the world of credit cards, but that is small stuff compared to what might happen in cyberspace when card numbers are floating round the Net. Will you let yours go floating away even if, with SET, Barclaycard, and Access telling you to?

Ay-up dial-up

A new Internet provider has just recently come on-line in the Manchester area. Based in Rochdale, Zen Internet is offering a 28.8kbps service. With a large number of potential Amiga 'surfers' in their area, Ross McWilliam, Zen's operations manager, explained that they are offering a specifically tailored suite of programs for them to connect to the service.

Developed by James Savage, the software allows the user to access the States via Zen's fast 10Mbit link. It includes e-mail, TCP dialer, FTP, and Web browser. All GUI driven. Cost - £10 per month.

Contact: Zen Internet Ltd. Tel. 01706 713714 Fax. 01706 715795 Email. sales@zen.co.uk WEB. <http://www.zen.co.uk/>

Shut Up!

As has been commented before in the Online Column, the freedom that the Internet brings from official control terrifies not so much the ordinary person in the street, who generally couldn't give an electronic tinker's curse what people say to each other in private or online, but it does put the fear of the Webbed God up those who wield power in what they claim to be the name of the ordinary persons in the street. The Powers That Be get their governmental or bureaucratic knickers in a rare old twist at the very idea that there is this whole global system that is functioning without any of their interference. They can't charge tax on it, they can't regulate its hours of activity, they can't rule who can use it and, until recently, they couldn't even try to control what passed over the Net.

Wow, isn't that awful? Look what happened to Communism when the photocopier and the cassette recorder let people who did not like the system communicate freely! Got to stop that! At once or even sooner. Yes, indeed, Minister.

As reported last month in **AUI**, action was taken against CompuServe by the Bavarian local authorities in Germany. CompuServe was threatened with legal and financial sanctions if it let some 200 user groups to which the Bavarian authorities objected remain up on the Net. Caving in to the pressure, though it is doubtful whether the busybody Bavarians could have legally made it stick, CompuServe took off the offending groups.

We warned last month that this was a nasty precedent and others would try controlling what went on the Net. Rarely have our predictions been so quickly fulfilled. (Next week the Lottery, we hope!) Now France and other countries have also tried to get into the act and are attempting to clamp down on the freedom of cyberspace.

In France, as usual they seem to be less concerned with sex, which appeared to be the main thrust, if we can put it that way, of the Bavarian intervention. Les Français concern themselves more with politics. After all wasn't the French Revolution about who controlled whom? What seems to have alarmed France's Right Wing government is a book called, appropriately, "Le Grand Secret" ("The Big Secret" for anyone who did not do French at school).

"Secret" is a book about the late French President Francois Mitterand's fight against cancer, written by the recently dead President's own doctor. For reasons unknown, the book has been banned by the French legal authorities. However, unhappy with the banning, the book's supporters have lifted, electronically, two or possibly only one finger at the prohibitors and published the whole now unsecret story on the Internet. Almost like the good old days of the Iron Curtain, isn't it?

Le French Government reacted in the same way that the old Communist bosses used to do. They want to stop this sort of liberty. Who do these people think they are, free citizens? So they are going to propose to the next meeting of telecommunications ministers of the European Union, of which the UK is a possibly reluctant member, to bring in a law to shut up people who do this kind of liberty thing over the Net. These publishing netters are "abusing the system", he said. Oh really? We thought the Internet was free and not controlled and therefore being used and incapable of being abused.

Le Ministre also suggested that there should be ethical codes for Internet operators similar to those "in place for France's telephone-based Minitel information system." Now that very suggestion is something of a joke - or it would be if it did not apply to France, because the Minitel system, which is the French equivalent of what used to be Prestel in the UK, has lasted, while Prestel has gone down the drain. Why? Mainly because the services on Minitel have been used by people who wanted to meet oth-

ers for sexual pleasure or, as Martin Witton might put it in his delicate way "a hot time in the sack." At the last count we heard that some 30% of all Minitel activity was sex inspired, that's unless you believe what Sigmund Freud thought in which case you could say 100%.

Some ethical behaviour but then, as we said, for the French ethics does not include sex, only politics - and of course, power.

Caught by the Fuzz

Ethical codes? Perhaps the French should tell that to the Japanese where use of the Internet is growing rapidly and the legality of publishing pornography on public computer networks is about to be tested in the courts following the first arrests for allegedly criminal use of the Internet.

Tokyo police have arrested a 28 year old man alleging that he produced images at home - they don't say if he had fun doing it - and "distributed" them on his Home Page. They found out because whatever he was producing became so popular he was asked by other Internet users to create "more provocative pictures".

That phrase possibly loses something in translation. Does it mean more pictures or pictures that are more provocative? We'll leave that to your imagination - or maybe you can keep that thought till later. The prudish Tokyo police also arrested a high school student and accused him of "distributing" porn since last September.

Now this also would be a joke too if it weren't serious. If you have visited Japan you would see graphic, and frequently sadistic, porn sold freely on every bookstall - though with somewhat peculiar sensitivity the depiction of pubic hair is banned. The egregious Manga stuff though is enough to make anyone feel that the Japanese should start looking at controlling the sadism in paper publishing in their society before they start coming the heavy on a bit of the old how's your father in the electronic world.

Stiff Penalties

In the USA, the Congress has just passed legislation that imposes "stiff penalties" - a rather unfortunate choice of words that - for the "distributors" of "indecent" material over the Internet. The fearful

Congress people managed to stick the new law to a totally unrelated Telecommunications Bill and so, for the first time, placed legal limits on the type of material that can be "distributed" over such networks.

Now the reason why the word "distributed" seems best in quote marks in this context is that no-one actually "distributes" anything over the Net. It's there if you want to go and look for it, but it isn't exactly being waved in your face like a pair of lace panties from a window in a red light district. But those governmental control freaks who want to make sure that they have everything shut up tight, including zippers and legs, still think in terms of conventional publishing. So it will probably be well into the next century before they understand that cyberspace isn't like that at all.

Perhaps in that ignorance lies the best support for the maintenance of the freedom of the Net. Most, if not all providers, oppose any controls. They think that the present and future rapid growth of the Internet and the electronic business that stems from it will be stunted by regulation. And anyway, lawyers are rubbing their hands in eager anticipation and openly saying it will be hugely difficult to regulate what goes on across the Net because the Internet carries - "distributes" - information, freely, across international borders.

Nevertheless, the Congress of the USA, the French, the Bavarians, and the others who feel they have a right to tell everyone what they may see, hear, and even do, sense that cyberspace threatens their power and they don't like that at all. As they can't shut it down, they will surely try to shut us up.

WEBMANIA

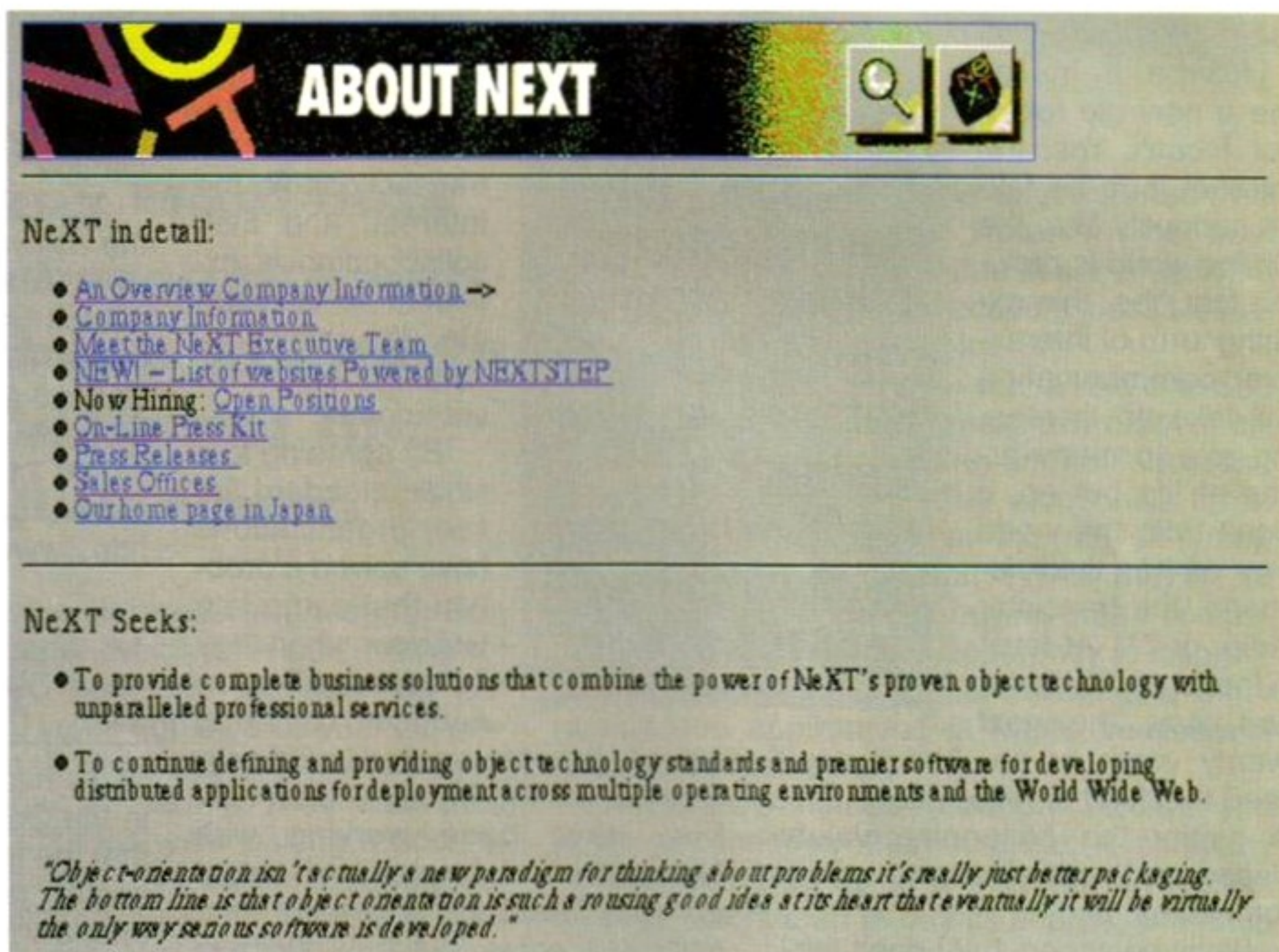
They can't keep down Steve Jobs, co-founder, in a small garage, of Apple so many years ago. Not content with making himself a billionaire second time around, by going public with his computer graphics production company that made the first Disney all computer graphic movie "Toy Story", he's also got his other company NeXT Software involved in the Net.

For longtime readers of AUI, NeXT might be familiar from having launched some years back, with a considerable fanfare of publicity from the erstwhile Apple boss who had been booted out of Macdom in a board room coup, what was supposed to be going out as the "next generation" of PCs.

NeXT had its own operating sys-

put out at 30 second intervals from cameras at the event. Not content with telling the cyberspace inhabitants how wonderful the NeXT stuff was, Jobs gave some of it away, allowing viewers to download free software as well as documentation from the company's Web site.

The software is still there for webbers to access on [http://](http://www.next.com)



ABOUT NEXT

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NeXT Seeks:

- To provide complete business solutions that combine the power of NeXT's proven object technology with unparalleled professional services.
- To continue defining and providing object technology standards and premier software for developing distributed applications for deployment across multiple operating environments and the World Wide Web.

"Object-orientation isn't actually a new paradigm for thinking about problems it's really just better packaging. The bottom line is that object orientation is such a rousing good idea at its heart that eventually it will be virtually the only way serious software is developed."

tem and some very good looking black boxes for the hardware that made the machines appear very trendy indeed. Sadly, for Steve Jobs - and the jobs of those involved with the hardware - the computer never caught on and the manufacture of those sexy black boxes ceased.

Yet the company kept on, and developed the operating system to such an extent that it is rumoured that IBM was and is still considering taking the company over to use the NeXT OS to replace their ill-fated OS/2 system.

However, as we said, you can't keep a good 60's/70's trendy down. NeXT has just come up with some enhancements to its system that include a family of WebObjects, NeXT's support for the Java language, and integration into NeXT of Web security standards.

Now what, we hear you cry, is special about that? Not that much, probably, but Jobs chose to launch it - or kick it off as he put it - with an event called WEBMANIA which went out all over the Net with a live RealAudio broadcast and still image video clips of the presentations made at a theatre in San Francisco. Interestingly the still video images, because of the slowness of video over the Net, were

www.next.com or if you want to talk to NeXT, we really like their free number 1-800-TRY NEXT.

Now Hear This

The sound system that NeXT used to let the world hear the words of wisdom from their boss Steve Jobs was RealAudio. This audio-on-demand system comes from Progressive Networks and resides on client server computers for Internet providers. With a dedicated server and encoder, providers of such data as news, entertainment, sports, and business can also deliver audio-based material.

If a user has a RealAudio player, a piece of software, users of multimedia computers and voice grade phone lines can browse, select, and play back audio on demand without any noticeable downloading delays and, says Progressive Networks, "as easily as using an ordinary VCR" - though not everybody finds that easy.

If you want to find out just how easy it is to hear audio on demand, you can hear all about it from the RealAudio site on WWW.realaudio.com.



CONTINUED ON PAGE 60

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Canon BJ 200/230	19.90	19.50	19.00	HP Deskjet 600/660C Tri-Colour	28.50	28.15	27.75
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Canon BJC 4000 Black Refill	8.50	8.30	8.00	Ring for Cartridges not listed			
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Commodore MPS1270	12.13	11.93	11.63				
Epson Stylus 400/800	9.99	9.79	9.49				
Epson Stylus Colour Black	14.00	13.75	13.40				
Epson Stylus Colour Colour	30.00	29.50	29.00				
Epson Stylus 820/Colour II/III Black	Ring for prices						
Epson Stylus 820/Colour II/III Colour	Ring for prices						
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Suitable for most Printers

Tri-Colour Inkjet/Bubblejet Refill Kits 16.00 each
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1000 White Tractor Feed 3 1/2" Disk Labels	10.99
3 1/2" Disk Cleaning Kit	2.99
Parallel Printer Cable (1.8m)	3.99
Mouse Mat 6 mm Thick - 2.99	8 mm Thick - 3.99
Mouse House	2.99
2 Piece Universal Printer Stand	5.99
14"15" Optical Glass Screen Filter	16.99

Paper & Address Labels

2000 Sheets 11" x 9 1/2", 60 gram,	1 box - 22.99
Micro Perforated, Listing Paper	2+ boxes - 17.99
500 Single Sheets A4, 80 gram, Laser	1 pack - 9.99
Paper (suitable for inkjet printers)	2+ packs - 6.99
Tractor Feed Address Labels,	500 - 4.49
1 across width, 3 1/2" x 1 1/2"	1000 - 7.49

All Prices INCLUDE VAT (@ 17 1/2%) & FREE UK Delivery

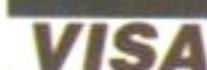
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E & O E



CONTINUED FROM PAGE 58

Free World Dialup

No, this is not another diatribe about how THEY are trying to shut us up. Free World Dialup is an interesting experiment that has been launched by Internet enthusiasts around the world to attempt to allow netusers to contact any telephone number around the globe whether or not the number is connected to the Net.

Present Internet software products such as DigiPhone and I-Phone allow phone connection between Internet users. The idea of Free World Dialup (FWD), which has some special software written for it, is that it will instruct the server which is running FWD, to dial out onto the local telephone network

might well have used Optonica's M.M. Experience, a special version of which recently appeared on **AUI's** SuperDisk. Or they could have gone the whole hog and acquired a copy of Scala, dongle and all, but if they have been involved in creating multimedia, especially CDs, on the PC or the Mac, then it would probably have been, at least for really professional looking stuff, Macromedia's Director.

Director dominates the multimedia creativity action for both machines, particularly as it allows a single authoring procedure to be used for both machines virtually simultaneously. Now Macromedia are literally bringing Director online. They are releasing an add-on for Director to create interactive multimedia productions on the Net.

The Shockwave tech-

help is at hand. Literally, for a company called Frontier Technologies has launched CyberSearch 2.0. This is a CD-ROM which lets Internet users search for useful information off-line. It will work with most browsers, Frontier says, including, their own.

CyberSearch consists of a huge database of Internet locations, searchable by keyword, integrated with an Internet Organizer which

by Oracle's Larry Ellison, which seemed then as a spoiler to stop Microsoft's drive toward world domination idea, is about to become reality.

J. B. Holston, the President of Ziff Davis, the company hosting the get together which was called EuroBoards 96, said, "The people attending this conference are in a position to shape their companies' marketing strategy in Europe. So it



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Welcome to the cutting edge of multimedia and design on the web!

Shockwave for Director click here

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in the
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and patch the calls through.

There are currently some practical problems about costs that will be incurred on the local phone networks. However FWD is not intended to be set up as a commercial system, initially it will only function as an experiment in giving private users the same cheap facilities that companies can enjoy. International calls can already be made by companies through BT's PBX lines at just 14p per minute.

If you would like more information on Free World Dialup, contact the man in charge, Jeff Pulver at <http://www.pulver.com/fwd>.

Shockwave!

Anybody who has had any experience in producing multimedia presentations on the Amiga

nology has been incorporated by such companies as Microsoft, Netscape, and Silicon Graphics for their browsers, authoring tools, and other products.

According to Macromedia, using a Shockwave compatible browser, allows a user to download "multimedia movies" which have been created with Director because Director itself becomes the player embedded in the browser.

Shockwave, say Macromedia, is free to authorised Director users via Macromedia's Web site which is at <http://www.macromedia.com>.

Online Offline

If you don't want to spend your valuable time - and your money - searching for the Web sites that you are longing to visit, worry not,

allows users to save and manage Internet site information. By using CyberSearch in an ordinary CD-ROM drive, Frontier claims that the user saves time and reduces Internet connection charges.

Frontier provides monthly updates to CyberSearch and included in the updates are "Hot Site Reviews" provided by NetGuide Magazine. Users can then connect to the "Hot Sites" via hyperlinks.

CyberSearch should be available by the time you read this and will cost \$29.95. Monthly subscriptions cost \$6.95. To find out more contact Frontier on 414 241 4555 or on their Web site - doubtless a "hot" one at <http://www.frontier.com>.

It's Coming or Is it?

At a recent gathering of the top European computer hardware, software and distribution bosses recently in Switzerland, 58% expressed their conviction that there will be a \$500 Internet machine available in 1996. We can't say that even the Amiga can match that price, some £300, with the latest Amiga Technologies offering barking up against the £600 mark.

In just a few months, it appears that the spark of genius put forward

is notable that so many expect to see an "Internet appliance" on the market by the end of the year."

While 80% of those attending the Conference believed that more than 10% of the population of their territory will be online by year end of 1998, only 28% of them currently have an Internet site themselves. Yet some of those 72% who don't, must have been among those who thought that "Internet appliances" will be among us by this year's end.

If they believe that is what is going to happen, the least they could do for their businesses is to get online themselves, don't you think? Is this another example of people saying one thing but doing another? **AUI**

AUI On-Line

If you have any news, comments, letters, or technical questions, you can contact **AUI** directly using this e-mail address:

amigauser@cix.compulink.co.uk

Or you can join our Amiga User Conference on CIX, or contact us personally with e-mail.

Internet Made Easy

David Ward reviews some cyberspace guides.



The Internet Made Simple

At last, an Internet book from a UK point of view. Unsurprisingly as more Netters in the USA use the Internet than the rest of the world combined, most cyberspace books are written from their point of view.

Peter McBride, the author, takes the reader from the 'who, what, where' stage through toarchie, gopher, and ftp in a very clear and concise way.

Each section adequately describes what's available, how to access it, the World Wide Web, and Windows' terminals.

Yes, this is a book designed for the PC user.

Although the Amiga and the Macintosh do get mentioned at the beginning, they don't get a look in later on.

Along with the descriptive text, there are jargon-busting boxes on most pages, useful tips and hints, and illustrations showing what you're supposed to see on screen.

The back of the

book lists numerousarchie and gopher servers, along with UK Internet providers and useful e-mail addresses.

The Internet Made Simple only takes a couple of hours to read, and is quite illuminating, even for the seasoned surfer.

INFO

The Internet Made Simple
Author: Peter K. McBride
Publisher: Made Simple
Books/Butterworth-Heinemann
ISBN 0 7506 2311 X
Price: £7.99

PGP: Pretty Good Privacy

This is a book and a half. It has to be. The subject matter is quite complex and the author, Simson Garfinkel, ensures that the reader understands the technology behind the encryption software PGP by continually repeating himself.

And boy, do you need to be hit on the head. PGP - Pretty Good Privacy - although simple in its concept, requires some serious concentration before the text sinks in.

It's all down to keys you see. PGP is (almost) unbreakable because it encrypts files by using combinations of 'keys' based on very long prime numbers.

Garfinkel explains the reason-

ing behind PGP, its development history, how to use it and, most importantly, why it should be used. PGP does not only protect private mail messages, but can be used to sign documents to safe-

guard their veracity.

Those of you familiar with Virus Checker will have noticed that the software is signed with a PGP signature to discourage tampering. Thus avoiding the possibilities of fake Virus Checkers, which actually contain a virus, to invade our computers.

Unfortunately Garfinkel also tells us how governments wish us not to use PGP. In some countries, notably France, encryption is actually illegal. There were even problems in the US when PGP first appeared. It was not allowed to be exported, but hackers soon spread the word.

This is a book you should have on your shelf. You may not need it now but, at some point in the increasingly electronic future, you will need to safeguard your privacy. Eavesdroppers are not limited to Government agencies!

INFO

PGP: Pretty Good Privacy
Author: Simson Garfinkel
Publisher: International Thomson Publishing
ISBN 1 56592 098 8
Price: £18.50

Zen and the Art of the Internet

Another PC Internet book. Not only PC for IBM compatible PCs, but also PC as in Politically Correct.

Throughout the book Brendan Kehoe talks of the people who operate behind the scenes of the Internet as 'she'. Obviously no men are involved in this worldwide enterprise.

Zen... etc., a title obviously intended to echo the 70's best seller 'Zen and the Art of Motorcycle Maintenance', which brought cultish spirituality into the service of technology, is now in its fourth edition, and grew from a slim volume put together to help newcomers to the electronic world now known as cyberspace. In fact

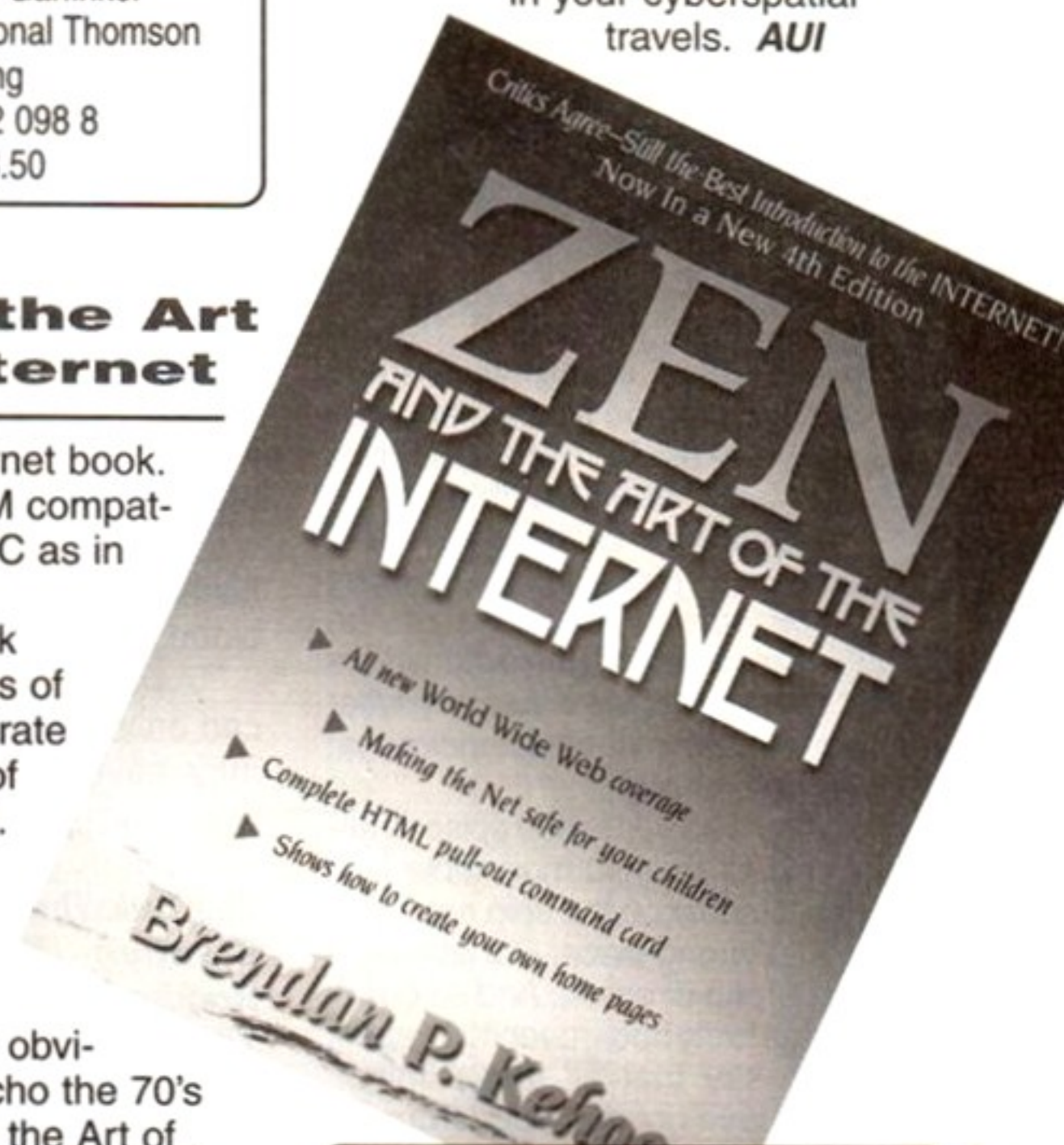
Zen... , the first edition, can be downloaded from the Internet for free. If you have a CD-ROM drive the file is also on Aminet 9.

Whereas Internet Made Simple is a quick guide to getting on and using the Internet, Zen... gives much more in-depth information. Although from an U.S. point of view.

This point of view can be distorting, especially when it comes down to costs. Kehoe talks of cheap ISDN connections for the domestic environment. Even businesses in the UK balk at the cost of such lines as provided by BT.

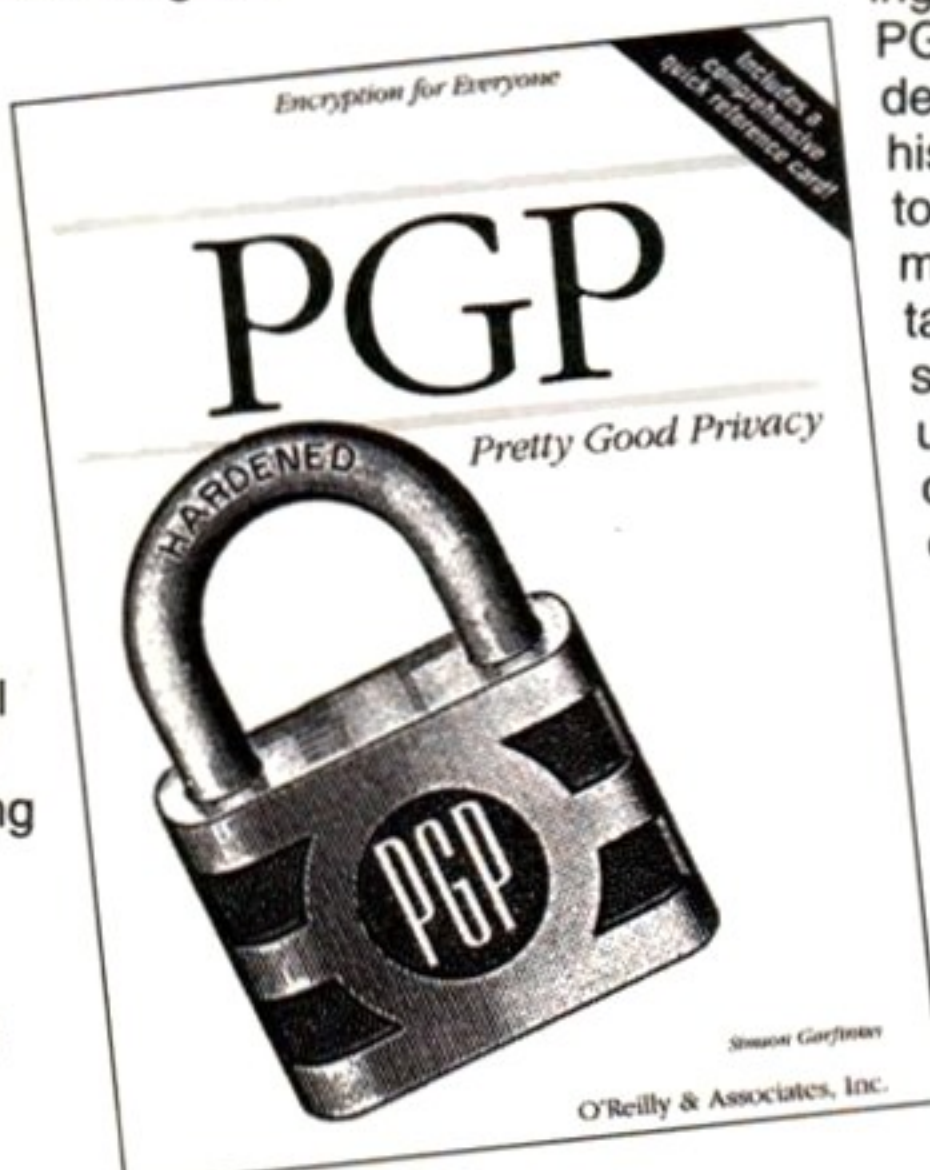
North Americans who push the Internet as a wonderful medium that everyone is going to be on, sometimes forget that their standard of living is much higher, that they have lower taxes, and above all, free local telephone calls.

All this aside, Zen... has always been regarded as the best book for surf beginners, and I can see no reason why the fourth edition should not continue this tradition. It explains the Internet and World Wide Web in a simple fashion, and would be a useful volume to reference when you are stumped in your cyberspatial travels. **AUI**



INFO

Zen and the Art of the Internet
Author: Brendan P. Kehoe
Publisher: Prentice Hall
ISBN 0 13 452914 6
Price: \$23.95



STAR TREK

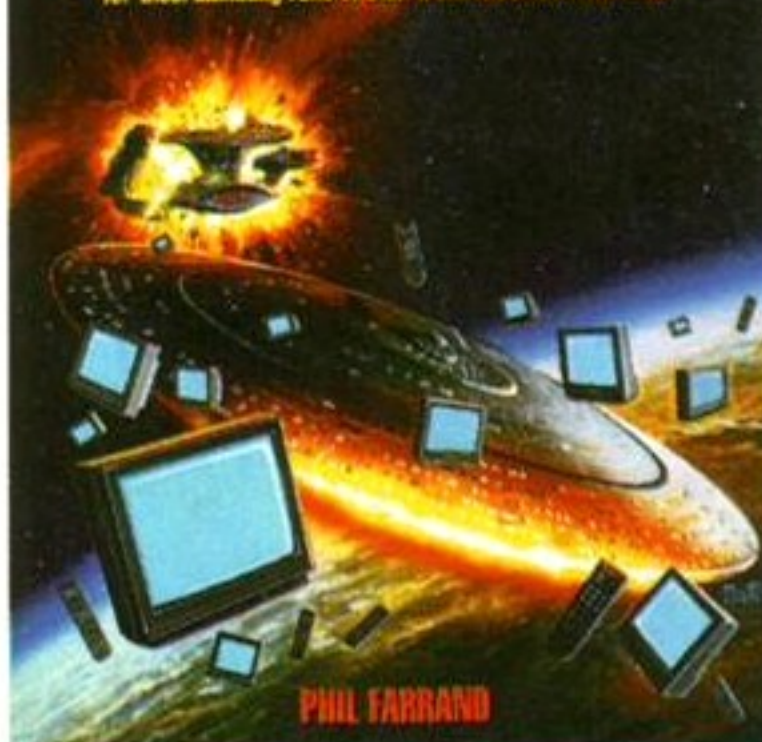
THE BOOKS

The Nitpicker's Guide... Vol.II

This is, in fact, the third volume in the series by Phil Farrand and his crew of 650 plus nitpickers. He has already covered ST:TNG in volume one, and ST:TOS in The Nitpicker's Guide for Classic Trekkers. This new book covers the seventh, as well as the film 'Generations', and clears up errors in the first volume.

The Nitpicker's Guide for NEXT GENERATION TREKKERS VOLUME II

More Bloopers, Flubs, Technical Screw-ups and Plot Discrepancies for Discriminating Fans of Star Trek: The Next Generation



So what is a Nitpicker's Guide all about? Plot oversights, equipment oddities, continuity problems. They're all listed here, along with trivia questions, facts and figures, and plot outlines - very useful, but no pictures. Still, you can't have everything.

The Nitpicker's Guide is a mine of information, often answering per-pexing questions raised in some of the episodes. It's a pity that the scriptwriters do not refer to it, as we would not suffer some of the glaring inconsistencies that occur occasionally.

Problems solved in one episode are later found to be insurmountable in a later one. Rooms on the ship are found to be in the wrong place. Planets are lit from the wrong direction. And so on.

The is a hefty book, over 400 pages, but I can say that all these 'minor' problems have not detracted from my enjoyment of ST:TNG over the years. Still it is a useful book to have on the shelf for its in-depth episode guide.

The Nitpicker's Guide for Next Generation Trekkers Vol. II
Compiled by Phil Farrand
Titan Books
ISBN 1 85286 671 3
£7.99 paperback

Few television series have spawned such a wide variety of books as Star Trek. AUI's avid Trekker readers review a selection.

Star Trek: The Making of the TV Series

Here the late Gene Roddenbury tells us all there is to know about the creation of the original, classic, television series of the Sixties.

In conjunction with Stephen Whitfield, we get to hear how the characters were developed, how the Enterprise shape evolved, and where some of the props came from.

There are many interesting anecdotes, photographs - over sixty of them, and interviews. One little story, about how Gene Roddenbury came to think up Dr. McCoy's diagnostic beds for the sickbay, stuck in my mind.

For some reason, at the time of reading this book, I was certain his explanation was not entirely accurate. Then, in a re-run of Gerry Anderson's Stingray, the answer came to me.

In the episode entitled 'Invisible Enemy', made in 1964, a comatose man is brought into Marineville's hospital. It is then we see it is equipped with a diagnostic bed complete with flashing lights and scales to measure blood pressure and so on.

As Star Trek was aired in 1966 I can only assume Gene Roddenbury may have seen Gerry Anderson's work, and that is where the idea came from. Or do great minds think alike?

Star Trek: The Making of the TV Series
Stephen Whitfield & Gene Roddenbury
Titan books
ISBN 1 85286 363 3
£7.99 paperback

Star Trek: Revisitations

There are over 60 novels based on the classic Star Trek series, with more being issued all the time. As for Next Generation, there a couple of dozen already available. They range in price

from £4 to £5.

Star Trek: Revisitations is a graphic novel. Or to us old 'uns, a respectable comic book.

It contains two separate stories that make use of 'guest' characters



from episodes in the TV series. One is the infamous Harry Mudd, the other... well, I don't want to spoil it for you.

The stories are written by Howard Weinstein, who has had several novels for both series, and provided stories for the animated version of the TV series. These are brand new 1995 vintage, but the first story is set some time after 'The Voyage Home'.

It took me about an hour to read both stories within the book. Not bad, but I doubt if they will become classics. The drawings are good, but at this price the book is really only for obsessive Trek devotees.

Star Trek: Revisitations
Stories by Howard Weinstein
Artwork by Gordon Purcell & Rod Whigham
Titan books
ISBN 1 85286 684 5
£12.99

Star Trek: The Next Generation Technical Manual

The Star Trek: TNG Technical Manual contains invaluable information about the NCC-1701D and answers many of the "loose ends" that may be left in your mind after watching the series. To look at the technical specifications of the Enterprise D, you can only then fully appreciate how complex it is.

The manual contains details on almost all of the Enterprise's functions, but has some material deliberately unexplained, to leave the Star Trek story open ended. If you are a fan of Star Trek, then I must say this book is essential for your needs (those of Star Trek anyway).

It covers the functions of the Enterprise D and its subsystems in some depth, occasionally containing scads of technical information (it is a technical manual after all - what do you expect?). For instance, a quote from the manual...

"Warp driver coil efficiency to meet or exceed 88% at speeds up to warp 7.0. Minimum efficiency of 52% to be maintained through warp 9.1"

To be perfectly honest, I did not understand much from that last announcement, but that's not to say I did not agree with it. It sounds feasible, therefore believable. For instance, if you were in a discussion, then a quote from the manual can prove invaluable to impress the people around. Unless, of course, they too have a copy of the book, in which case you've found somebody interesting to talk to!

The manual presents so much information on the Enterprise D, that it may take a while to absorb and understand it. A lot of work has been put in and you realise this if you look at the credits. A large number of people have contributed to make all this fantastic stuff make-believable.

The point is that you must be ready to believe that all the information is true. There are plenty of illustrations, showing you various aspects of the ship, which adds to the authenticity. On the whole, an excellent reference book for those who are interested in space - the final frontier.

Authors: Rick Sternbach, Michael Okuea, et al.
Boxtree Ltd.
ISBN 1 85283 340 8
£13.99



AUI 001

Hard Driving

Part 4

ADDING AN EXTRA DRIVE

You can never have enough... hard disk space that is.

This month, Alan Lewis explains the ins and outs of adding extra megabytes to your existing system.

If you are short of room, despite having compressed every file you can and pruned as much as possible, then you will have to consider buying either a larger hard disk, a second drive, or another controller and drive.

The first option, a larger drive, is only recommended if you cannot fit another drive in your Amiga. (Later I'll examine ways of storing extra drives in an external case). Although buying a larger drive may be the cheapest option, it is rarely the most flexible. Unless you relish the thought of re-installing all your software, and possibly re-configuring it, you will have to backup your first drive, remove it, install the new drive, prep and format it, then re-install everything.

Whether you can add a second drive depends on your existing interface. Let us look at each, IDE and SCSI, in turn.

IDE interfaces

Theoretically, all IDE interfaces can control two drives. However, if you have an A600 or A1200 you will have a problem finding room in which to put a second drive, and finding a means of powering it! Big box Amigas are reasonably well endowed with drive bays, and so should not have too many problems. Furthermore, the cheap IDE controller Commodore installed in the A1200 may limit your expansion potential.

IDE drives are notoriously fickle about other drives with which they will work. First, a drive has to be

set as the Master drive, and the other as a Slave drive. This is accomplished using jumpers.

Some drives will point blank refuse to work with other drives, even those made by the same manufacturer. When you order a second drive, check with the supplier that it will work with your first drive, and see if he will accept the drive back if it doesn't. Better still, make it part of the conditions of buying, so giving you the legal right to return it if it doesn't work suitably.

Drives should be supplied with the jumper setting information. If not, contact the drive manufacturer for details of the appropriate jumper settings.

It is worthwhile looking at the ATAPI software. This allows the use of an ATAPI compliant CD-ROM on the A600, A1200 and A4000 IDE controller, and also supports up to 4 units on the A4000 and A1200, including up to two hard disks and a number of CD-ROMs. I have not actually used this, but Blittersoft should be able to supply you with more information concerning it.

SCSI

SCSI is a far more sensible method of expanding your system, as it is more flexible when it comes to adding new devices. All you need



This Seagate hard drive has a table printed on it showing what the different jumper combinations do. It's a pity other drive manufacturers don't follow this example.

to do is attach the new device, set the device number, supply power, and away you go.

To add a second (or third, or fourth, and so on) hard disk, first set the device number on the new drive. Your controller card will usually use either 0 or 7 for itself. If you are not sure what number your existing drive has, run the software you used to partition the drive. Now set your new disk to a higher number, attach the drive to the SCSI cable, connect power and boot up.

Again, jumper setting information should be provided, but if not, contact the manufacturer. Alternatively, try adding the drive and powering up. If the Amiga boots,

you know there are no conflicting settings. Run your hard disk Prep software, and check what number the new drive has. If it has a lower SCSI number, change the jumper settings, and repeat the process until it has a higher number.

After you have added your second drive, it needs to be partitioned and prepped as did the first, and then AmigaDOS formatted for use. Make sure you are working on the new drive, and not the first!

You will probably need to modify your SCSI cable to add another internal drive. Most Amiga SCSI cards (with the drive on the card) use a short cable. This will need to be replaced with a cable long enough to reach from the controller to the first drive, and then to the new drive. If the existing cable is long enough, you will probably need to add another connector as most cables only have a connector at each end. If you don't have access to a crimping tool (and most of us don't!), the easiest way to do this is to place the connector

Most Amiga SCSI cards (with the drive on the card) use a short cable.

Top tip

Tip: There are often only three pairs of pins on which the jumpers sit, labelled 1, 2, 3, or 0, 1, 2. The jumper determines whether a particular pair of pins are on or off - 1 or 0 - as in binary numbers. It follows then that if all three pairs are on, we have 111 which is 7. If the middle pair is on, the number is 010 or 2 in decimal notation.

and cable in a vice and gently close it. Make sure the connections are firm, and the connector is tight. Or pay your local dealer to do the work.

If the device you are adding is external, then you will need a different SCSI lead. Almost all Amiga SCSI controllers have an external 25-way D type connector. Most external SCSI devices use a 50-way style Centronics connector (called an Amphenol connector), very similar to that on printers. You will need to buy a 25 to 50 way cable. I strongly suggest that you buy a shielded cable, to eliminate any electrical interference.

Make sure with any SCSI device that you know which sort of connectors the new unit needs. SCSI-2 uses a different internal connector to SCSI-1, and you may need to buy a cable which can connect between devices which use differing interfaces.

The only real headache with SCSI is that of termination. Termination stops the signals that are being sent down the cable from "bouncing" off the last device added and travelling back along the cable, thus causing interference and errors. SCSI devices are "daisy-chained" together; at one end you have the controller card linked to a device, either on its own or attached to another device, and so on. Each end of the chain has to be terminated, and the devices in the middle unterminated. In general, all SCSI controller cards are terminated. Let's look at a few examples.

SCSI Card - drive 1

Both the card and the drive are terminated.

SCSI card - drive 1 - drive 2

The card and drive 2 are terminated, drive 1 is not. If we had 4 drives fitted, then drive 4 would be terminated and the remainder left unterminated.

The question of termination also rears up when considering external devices. I'll look at that when I have a look at expanding beyond hard disks.

Now that you have decided whether you can fit another drive, consider where it will live. In a big box Amiga, this shouldn't pose a problem, unless all your drive bays are full. If you cannot fit the new device inside, then you will have to look at the options of storing it externally. This will be explained, after we have cover adding devices other than hard disks.

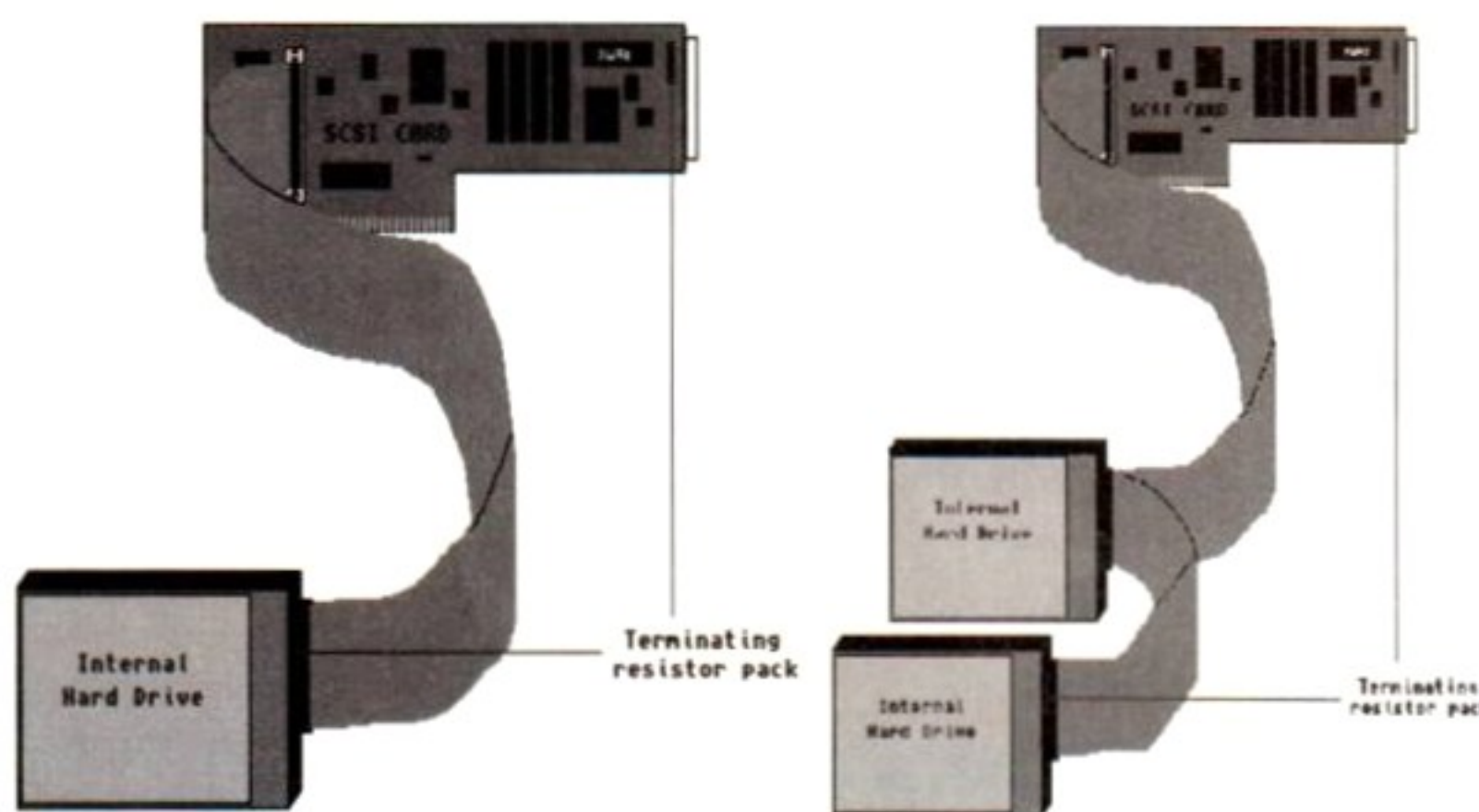


Figure 1 shows a few examples of which drives are terminated, and covers the basic combinations of terminating internal SCSI devices.

Beyond Hard Disks

Both SCSI and IDE interfaces are capable of controlling more than hard disks. Some IDE controllers can handle CD-ROMs as well, although on the Amiga this may require additional software such as ATAPI. Check with the dealer who supplied the interface. And you may have to devote considerable thought on how you will house these devices in an A1200 or A600.

SCSI interfaces can, of course, control CD-ROMs, tape streamers and DAT drives, and optical drives, attached internally or externally.

Tape streamers and DAT drives are just plug-and-go devices, (once you have sorted out termination and device numbering, of course). Provided your backup software is able to handle them - both AmiBack and Quarterback can - they are ready to use. You may have seen a product advertised by the name of Tapeworm, which allows you to use a streamer or DAT drive as a pseudo-hard disk. I wouldn't really bother using it on a tape streamer, it's just too slow. You are better off spending the money on another hard disk. As DAT drives are much faster, the software performs better, but DAT drives are far more expensive. Better to buy another real hard disk.

CD-ROMs

CD-ROMs are a different kettle of fish. You will need some additional software to access a SCSI CD-ROM. If you bought it from an Amiga dealer, it should come supplied with the necessary software, but if you bought it from a PC supplier, or second-hand, you still don't need to worry. Probably the best software is to be found in the Public Domain by the name of AmiCDFS -

Amiga CD Filing System. First Choice computers in Leeds do an excellent two disk version of this, which comes with an very good Installer, and a disk full of support software, such as programs to play audio CDs from a CD-ROM drive. Other CD filing systems exist, such as CachCDFS, Xetec CDFS, and AsimCDFS.

Finally, SCSI scanners and printers are available. These need device drivers, and unfortunately there are no Amiga drivers for SCSI printers. The most popular Amiga scanner is the Epson range, and these are provided with Amiga drivers.

Earlier, we considered the requirements of adding a second drive; cabling, connectors, device numbers, and termination. The major obstacle was how to house the device. There are some options.

External Cases

There may come a time when the number of extra devices you add to your Amiga exceeds its storage capacity. Perhaps you have acquired another bare hard disk, or have been offered an internal tape streamer or similar. A500, A600, and A1200 owners will hit this limitation sooner than the users of the larger models, but regardless of which Amiga you have, the problem remains the same.

So what can be done about it? Provided you opted for the SCSI route in adding your hard disk, quite a lot. Owners of IDE interfaces may experience some difficulty in finding appropriate cases and cabling. A600/A1200 owners

also face a major problem with the cheap IDE interface Commodore implemented, but more on that later.

The first solution is to buy a tower case, which has advantages. Purpose built tower cases are available for the A1200 and A4000. For the A1200 user they have the advantage of adding Zorro 2 slots. For the A4000 owner, a tower case offers more Zorro 3 slots, an extra video slot, and four or five (depending on which you buy) PC ISA slots, important for those who wish to add a bridgeboard PC, or use PC ISA cards via the GG2 Bus Bridgecard. And of course, both offer more storage room. However, these tower cases can cost in excess of £350.

An alternative solution is to buy an external case. Generally, this consists of a reasonably strong steel box with an inbuilt power supply, and SCSI IN and OUT connectors, normally of the 50-pin Centronics (SCSI-1) variety. Such boxes are normally only hold one - or at most two - devices. They cost

in the region of £60. Also available are SCSI towers, which can hold several 5.25" and 3.5" devices, some which may be accessed externally (for example, tape/DAT drives, and removable media). However, these can cost over £200.

It is possible to make your own for about a quarter of that. I have yet to see an external case for IDE drives, although there is nothing stopping you modifying a SCSI case for the purpose.

The third option is that of a PC mini tower case. Surprised? Think about

it; a PC case (usually) has an inbuilt PSU, an on/off switch, and masses of room for storage devices. The average case is designed to allow access to floppy drives and CD-ROMs, as well as internal hard disks, and naturally, it is all housed in a neat, compact unit. The norm is two 3.5" drive bays and three 5.25" drives, all accessible from the front. Often, there will be room for two or more internal drives. This is more storage capacity than most of us will ever use, and if you need more, you can always opt for a full sized tower case. Typical prices range from £30 upwards. If you decide to take this option, make sure your case has at least a 200W PSU.

A PC case does not come with SCSI ports, so you need to think of

Some IDE controllers can handle CD-ROMs as well, although on the Amiga this may require additional software such as ATAPI.

Hard Driving 4

CONTINUED

how you will attach your existing SCSI kit to devices housed externally.

You could buy an extra long SCSI ribbon cable. This, while functional, is not very elegant, and such a long cable would almost certainly introduce errors on data transfers. If you have a Squirrel interface, you will not have a problem as the Squirrel adaptor has its own cable, and is external to the Amiga in the first place. Assuming your existing SCSI controller has an external connector, then this is the best method of attaching the new devices. Almost all Amiga SCSI controllers have a 25-way D connector, so all you need to purchase is a 25-50 adaptor.

External SCSI devices require terminating in the same way as internal devices. You may also have to remove jumpers from your internal devices. The last SCSI device on the external chain must be terminated, and just like a chain of internal devices, any units between the controller and last device must be unterminated. In theory, when an external device is fitted, all internal units should have their terminators removed.

This really is device dependant though. If you remove the terminators from all your internal devices, and start to experience errors, terminate the last device on the internal SCSI chain. Figure 2 shows the basic combinations for device termination when you have both internal and external devices.

We have talked exclusively about SCSI devices and external cases. It is possible to house extra IDE units in this manner. However, you need to consider how you will attach them. I have not seen a purpose designed case for housing IDE units, with an appropriate external connector, so the only solution is to use a long IDE cable from the controller to the existing drive, and then on to the external device. However, this means that your external case will be permanently attached to the Amiga.

A possible workaround is to use a short IDE cable at the Amiga end, from the controller or motherboard, which terminates in a female IDE connector, and has the existing drive in between the two ends. The external case would have a cable from the extra device that ends in a male IDE connector, allowing you to plug and unplug the two units as required. Beware, you will probably experience errors due to interference on such a long cable.



A typical 'mini tower' case for adding extra SCSI devices to your Amiga.

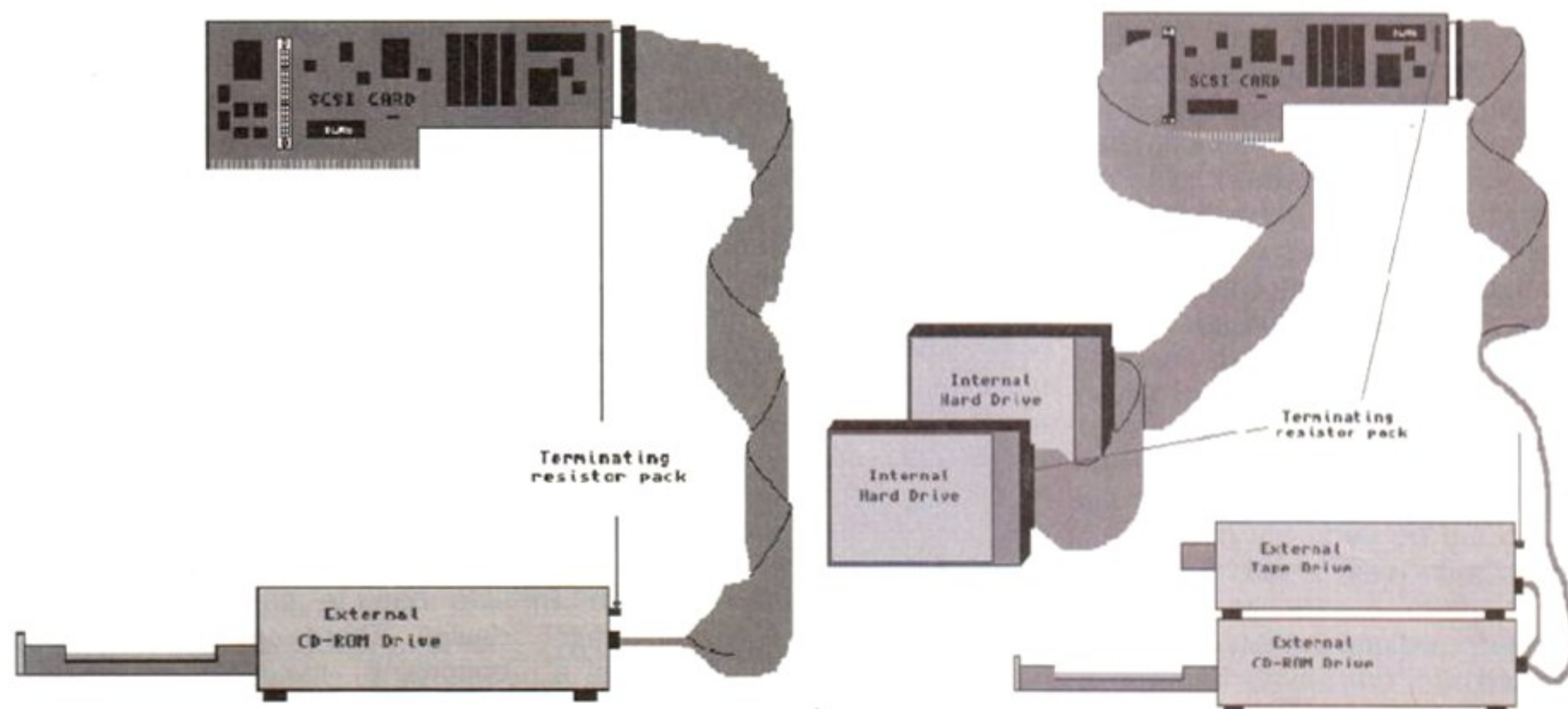


Figure 2 shows examples of how external devices are terminated

Before all you A600/A1200 owners rush to expand your Amigas in this way, we should come back to that interface problem mentioned earlier. Commodore used a very cheap and cheerful IDE interface, and it is not fully buffered. In practice, this means that if you use a cable longer than a couple of inches there is a good chance of your losing data, as read/write errors are caused on the disk. Bear this in mind when considering expanding your setup. A better bet might be to bite the bullet and save a lit-

Almost all Amiga SCSI controllers have a 25-way D connector, so all you need to purchase is a 25-50 adaptor.

tle more, and invest in a trapdoor SCSI adaptor, or a PCMCIA SCSI adaptor such as the Squirrel.

If you think I am opposed to the IDE route, you are right. IDE drives are fine when used in a big box Amiga, but on the A500, A600 and A1200 I think that they are only useful as a single internal drive. Don't get me wrong, they certainly have a place, and are very useful, but as a basis for future expansion they are really a non-starter except for the most determined user. SCSI is a much more viable and expandable option. True, it is a

little more expensive in the short term, but the extra expense of SCSI is more than outweighed by the ease of use and its expansion capabilities.

Don't forget though, if you use an external storage case of any kind, be very careful when moving your Amiga about - remember it is attached to another box! **AUI**



WIN a Two Piece CD Micro Hi-Fi

Dear Reader, can we ask you to do **AUI** magazine an important favour? We are currently carrying out a survey amongst our readers. This survey has been compiled and produced with the help of ICD Marketing Services Limited, a company specialising in this field. This research will help us to understand what you think of the magazine and disk contents as well as what you will need from **AUI** in forthcoming months. Your answers will be used, by both ICD and ourselves, for analytical and marketing purposes and may be passed on to other organisations who may wish to send you details of products and services that are likely to be of interest to you, based on your answers. If you would prefer not to receive these offers, please tick the box at the end of the survey. To show our appreciation for your help we will enter the names of all respondents in our **Prize Draw** to win an Amstrad Micro 1500 two piece CD Micro Hi-Fi (RRP £169.99). Simply tick the boxes, complete the name and address section overleaf and return to the following address:

AUI READER SURVEY, Unit 2 Utopia Village, 7 Chalcot Road, London NW1 8LX.

Amiga User International Reader Survey

1. Why did you buy this issue of **AUI** ?

(Please tick all that apply)

- Impulse purchase in newsagent ☐ 1
 Attracted by free disks ☐ 2
 Interested in subject area ☐ 3
 Had read previous issue ☐ 4
 Recommended by friend ☐ 5
 I subscribe to **AUI** ☐ 6

2. If you bought from a newsagent, how easy was it for you to find your issue of **AUI** ?

- It was on display in the first newsagent I visited ☐ 1
 It was in the first newsagent but I had to ask for it ☐ 2
 I had to visit a number of shops before I found it ☐ 3

3. How do you generally obtain your copy of **AUI** ?

- Saved for me by a newsagent ☐ 1
 From a newsagent's shelves ☐ 2
 On personal subscription ☐ 3
 Read someone else's copy ☐ 4

4. How many issues of **AUI** have you read in the last year?

- One-two ☐ 1
 Three-four ☐ 2
 Five-six ☐ 3
 Seven-eight ☐ 4
 Nine-ten ☐ 5
 Eleven-twelve ☐ 6
 None previously ☐ 7

5. For how long have you been a reader of **AUI** ?

- Less than 6 months ☐ 1
 Between 6 and 12 months ☐ 2
 1-2 years ☐ 3
 2-3 years ☐ 4
 3-4 years ☐ 5
 More than 4 years ☐ 6

6. On average, how long do you spend reading each issue of **AUI** ?

- Up to 30 minutes ☐ 1
 30 to 60 minutes ☐ 2
 1 to 2 hours ☐ 3
 Over 2 hours ☐ 4

7. How many other people read your copy of **AUI** ?

- One ☐ 1 Four ☐ 4
 Two ☐ 2 Over Four ☐ 5
 Three ☐ 3 None ☐ 6

8. What do you do with your copy of **AUI** after you have finished reading it?

- Keep the whole copy for reference ☐ 1
 Keep parts of it for reference ☐ 2
 Pass it on to someone else ☐ 3
 Throw it away ☐ 4

9. For which of the following reasons do you buy **AUI** ? (Please tick all that apply)

- To find out what's new in the Amiga world ☐ 1
 To keep up-to-date with technology ☐ 2
 For the Answers section ☐ 3
 For the adverts ☐ 4
 For the Superdisks ☐ 5

10. Overall, how do you find the coverage of Amiga hardware and software?

- About right ☐ 1
 Not technical enough ☐ 2
 Too technical ☐ 3

11. How should we improve the Superdisks?

- More utilities ☐ 1
 More games ☐ 2
 Easier installation ☐ 3
 No change ☐ 4

12. What would you like to see more of in **AUI** ? (Please tick all that apply)

- Hardware reviews ☐ 01
 Productivity software ☐ 02
 Entertainment Software ☐ 03
 CD-Roms ☐ 04
 Features ☐ 05
 TechnoWorld ☐ 06
 Online ☐ 07
 PD Stakeout ☐ 08
 Answers ☐ 09
 Letters ☐ 10
 Programming Tips ☐ 11
 Book Reviews ☐ 12

13. Which Amiga products did you buy in 1995 ? (Please tick all that apply)

- Computer ☐ 1 Printer ☐ 2
 Games software ☐ 3 Other software ☐ 4

14. How much do product reviews in **AUI** influence you when buying?

- A lot ☐ 1 A little ☐ 2 Not at all ☐ 3

15. Which computer products are you planning to buy in 1996? (Please tick all that apply)

- Modem ☐ 1
 Hard Drive ☐ 2
 Joystick ☐ 3
 Accelerator ☐ 4
 CD-Rom drive ☐ 5
 Genlock ☐ 6

16. Which other computer magazines do you regularly buy? (Please tick all that apply)

- Amiga Format ☐ 1
 Amiga Computing ☐ 2
 CU Amiga ☐ 3
 Amiga Power ☐ 4
 Amiga CD32 ☐ 5
 Computer Shopper ☐ 6
 PC Plus ☐ 7
 Which PC ☐ 8
 PC Home ☐ 9

17. Which Amiga computer do you own?

- A500 ☐ 1 A1500 ☐ 5
 A600 ☐ 2 A2000 ☐ 6
 A1000 ☐ 3 A3000 ☐ 7
 A1200 ☐ 4 A4000 ☐ 8

18. What Peripherals do you own? (Please tick all that apply)

- Modem ☐ 1
 Hard drive ☐ 2
 Floppy drive ☐ 3
 Sound sampler ☐ 5
 CD-Rom ☐ 6
 Graphics card ☐ 7
 Accelerator card ☐ 8
 Video grabber ☐ 9

19. What do you use your Amiga computer for? (Please tick all that apply)

- Graphics ☐ 1 Wordprocessing ☐ 4
 DTP ☐ 2 Games ☐ 5
 Accounts ☐ 3

20. In 1996 will you buy products involved with? (Please tick all that apply)

- MultiMedia ☐ 1 Sound mixing ☐ 4
 Internet ☐ 2 Productivity ☐ 5
 Video mixing ☐ 3

21. Are you connected to the Internet?

- At home ☐ 1
 At work ☐ 2
 Both at home and work ☐ 3
 I plan to be in the next year ☐ 4
 No ☐ 5

22. Do you use any other type of computer? (Please tick all that apply)

- PC ☐ 1 UNIX ☐ 2
 Mac/Power PC ☐ 3

23. Do you own a games console? (Please tick all that apply)

- Nintendo ☐ 1 Playstation ☐ 4
 Sega ☐ 2 Sega Saturn ☐ 5
 3DO ☐ 3 Jaguar ☐ 6

24. What would you like to see advertised more in **AUI** ? (Please tick all that apply)

- Printers ☐ 1
 Hard drives ☐ 2
 Accelerators ☐ 3
 CD-Rom drives ☐ 4
 Software ☐ 5

PLEASE TURN OVER:



Amiga User International Reader Survey

25 Please give your name in the way you should be addressed.

Mr ☐ Mrs ☐ Miss ☐ Ms ☐ Other ☐ 5 ☐

Surname

Forename

Address

Town

County

Postcode

Telephone

26. Marital Status Single ☐ Married ☐ Divorced ☐ Widowed ☐

Partner's surname

Partner's forename

27. What is your date of birth?

28. What is your partner's date of birth?

About You

29. What is your occupation?

You	Ptnr	You	Ptnr
Director 01 <input type="checkbox"/>	15 <input type="checkbox"/>	Local Gov't 08 <input type="checkbox"/>	22 <input type="checkbox"/>
Manager 02 <input type="checkbox"/>	16 <input type="checkbox"/>	Professional 09 <input type="checkbox"/>	23 <input type="checkbox"/>
Self Employed 03 <input type="checkbox"/>	17 <input type="checkbox"/>	Armed Forces 10 <input type="checkbox"/>	24 <input type="checkbox"/>
Skilled/Trade 04 <input type="checkbox"/>	18 <input type="checkbox"/>	Student 11 <input type="checkbox"/>	25 <input type="checkbox"/>
Manual Worker 05 <input type="checkbox"/>	19 <input type="checkbox"/>	Homemaker 12 <input type="checkbox"/>	26 <input type="checkbox"/>
Office Worker 06 <input type="checkbox"/>	20 <input type="checkbox"/>	Retired 13 <input type="checkbox"/>	27 <input type="checkbox"/>
Shop Worker 07 <input type="checkbox"/>	21 <input type="checkbox"/>	Unemployed 14 <input type="checkbox"/>	28 <input type="checkbox"/>

30. Which of the following do you enjoy on a regular basis?

You	Ptnr	You	Ptnr
Antiques/Fine Art 01 <input type="checkbox"/>	15 <input type="checkbox"/>	Further Ed. 08 <input type="checkbox"/>	22 <input type="checkbox"/>
Betting 02 <input type="checkbox"/>	16 <input type="checkbox"/>	Gardening 09 <input type="checkbox"/>	23 <input type="checkbox"/>
Books 03 <input type="checkbox"/>	17 <input type="checkbox"/>	Pub 10 <input type="checkbox"/>	24 <input type="checkbox"/>
Competitions 04 <input type="checkbox"/>	18 <input type="checkbox"/>	Photography 11 <input type="checkbox"/>	25 <input type="checkbox"/>
Cookery 05 <input type="checkbox"/>	19 <input type="checkbox"/>	Religious Activities 12 <input type="checkbox"/>	26 <input type="checkbox"/>
Current Affairs 06 <input type="checkbox"/>	20 <input type="checkbox"/>	Sewing/Needlecraft 13 <input type="checkbox"/>	27 <input type="checkbox"/>
Football Pools 07 <input type="checkbox"/>	21 <input type="checkbox"/>	Theatre/Arts 14 <input type="checkbox"/>	28 <input type="checkbox"/>

31. Which newspapers do you usually read?

You	Ptnr	You	Ptnr
Daily Express 01 <input type="checkbox"/>	14 <input type="checkbox"/>	Guardian 08 <input type="checkbox"/>	21 <input type="checkbox"/>
Daily Mail 02 <input type="checkbox"/>	15 <input type="checkbox"/>	Independent 09 <input type="checkbox"/>	22 <input type="checkbox"/>
Daily Mirror/Record 03 <input type="checkbox"/>	16 <input type="checkbox"/>	Scotsman 10 <input type="checkbox"/>	23 <input type="checkbox"/>
Daily Star 04 <input type="checkbox"/>	17 <input type="checkbox"/>	Sun 11 <input type="checkbox"/>	24 <input type="checkbox"/>
Daily Telegraph 05 <input type="checkbox"/>	18 <input type="checkbox"/>	Times 12 <input type="checkbox"/>	25 <input type="checkbox"/>
Financial Times 06 <input type="checkbox"/>	19 <input type="checkbox"/>	Regional Daily 13 <input type="checkbox"/>	26 <input type="checkbox"/>
Herald 07 <input type="checkbox"/>	20 <input type="checkbox"/>		

32. If there are children in your home, please indicate how many and in which age groups

0-2 yrs 1 <input type="checkbox"/>	3-4 yrs 2 <input type="checkbox"/>	5-10 yrs 3 <input type="checkbox"/>
11-15 yrs 4 <input type="checkbox"/>	16-17 yrs 5 <input type="checkbox"/>	18yrs + 6 <input type="checkbox"/>

33. What is your approximate annual FAMILY income?

Under £5,000 01 <input type="checkbox"/>	£20,000-£24,999 05 <input type="checkbox"/>
£5,000-£9,999 02 <input type="checkbox"/>	£25,000-£29,999 06 <input type="checkbox"/>
£10,000-£14,999 03 <input type="checkbox"/>	£30,000-£39,999 07 <input type="checkbox"/>
£15,000-£19,999 04 <input type="checkbox"/>	Over £40,000 08 <input type="checkbox"/>

34. Do you/your partner own a business, or are you considering starting one?

Already own ☐ Planning to start ☐

Please tick if working from home ☐

Shopping

35. Have you bought goods by mail or by telephone in the last 2 years? Yes ☐ No ☐

36. If you own a cat or a dog what brand(s) of pet food do you regularly buy?

Cat Food

Dog Food

37. If you smoke, please write in the name of the cigarette brand you and/or your partner smoke most often.

You

Partner

Important: Please sign below that you are a smoker aged 18 or over.

You

Partner

Money & Investments

38. Are you considering changing your Bank or Building Society current account?

Yes ☐ Possibly ☐ 2 ☐

39. Do you consider your current personal pension arrangements to be:

Adequate ☐ Inadequate ☐ 2 ☐

Unsure ☐ 3 ☐

40. Do you/your partner have any of the following credit cards?(Please tick all that apply)

Credit Card ☐ Charge Card ☐ 2 ☐

Store Card ☐ Gold Card ☐ 4 ☐

Considering a credit card ☐ 5 ☐

41. Do you have/are you considering any of the following investments? (Please tick all that apply)

Stocks/Shares ☐ Have Cons ☐

PEP (Personal Equity Plan) ☐ 01 ☐ 07 ☐

Lump Sum Investment ☐ 02 ☐ 08 ☐

Unit Trust(s) ☐ 03 ☐ 09 ☐

Regular Savings Plan ☐ 04 ☐ 10 ☐

Will ☐ 05 ☐ 11 ☐

42. Would you consider professional help in arranging your personal finances?

Yes ☐ No ☐ Unsure ☐ 3 ☐

43. Do you foresee the need for a personal loan?

Yes ☐ Possibly ☐ 2 ☐

Your Home

44. What type of home do you live in?

Detached House ☐ Semi-detached House ☐ 2 ☐

Terraced House ☐ Flat/Maisonette ☐ 4 ☐

Bungalow ☐ 5 ☐

45. Is your home:

Owned ☐ Privately Rented ☐ 2 ☐

Council/Housing Association ☐ 3 ☐

46. Are you planning to move home in the next 12 months?

Yes ☐ No ☐ Possibly ☐ 3 ☐

Please tick if first time buyer ☐ 4 ☐

47. Are you considering any of the following home improvements?

Have Cons ☐ Have Cons ☐

Fitted Kitchen ☐ 5 ☐ Double Glazing ☐ 3 ☐ 7 ☐

Fitted Bathroom ☐ 2 ☐ 6 ☐ Security System ☐ 4 ☐ 8 ☐

48. If you have household insurance, in which month do you renew your cover?

Please write in month e.g.

Home Contents Insurance 1

Buildings Insurance 2

49. Do you already own or are you considering buying any of the following?

Have Cons ☐ Have Cons ☐

Home Computer ☐ 1 ☐ 5 ☐ Mobile Phone ☐ 3 ☐ 7 ☐

Camcorder ☐ 2 ☐ 6 ☐ Fax Machine ☐ 4 ☐ 8 ☐

Health

50. Does anyone in your home wear: You Ptnr Other

Hearing Aid ☐ 01 ☐ 05 ☐ 09 ☐

Soft contact lenses ☐ 02 ☐ 06 ☐ 10 ☐

Gas permeable contact lenses ☐ 03 ☐ 07 ☐ 11 ☐

Spectacles ☐ 04 ☐ 08 ☐ 12 ☐

51. Do you/your partner have, or are you considering, private medical insurance?

Have (private) ☐ Have (business) ☐ 2 ☐

Considering ☐ 3 ☐

52. If you have private medical insurance, in which month do you renew your cover?

Please write in month e.g.

Month:

Motoring & Travel

53. The following questions relate to your PRIVATELY owned car.

Make (e.g. FORD)

Model (e.g. ESCORT)

Type (e.g. GL)

Engine cc (e.g. 1600)

54. Who is insured to drive this car?

You ☐ Partner ☐ 2 ☐

Others (please state how many) 3 ☐

55. When do you plan to replace your car?

Within 12 mths ☐ 2-3 years ☐ Later ☐ 3 ☐

56. How much no-claims bonus will you receive on your next renewal?

0% ☐ 1 ☐ 10-39% ☐ 2 ☐ 40% ☐ 3 ☐

50% ☐ 4 ☐ 60% ☐ 5 ☐ Unsure ☐ 6 ☐

57. In which month do you renew your insurance cover?

Please write in month e.g.

Month:

58. Have you taken a cross channel ferry in the last 5 years, or are you planning to do so?

Taken ☐ Planning in next 12 months ☐ 2 ☐

59. How many times have you flown on BUSINESS in the last three years?

You Ptnr ☐ You Ptnr ☐

1-5 ☐ 1 ☐ 4 ☐ 6-10 ☐ 3 ☐ 6 ☐

10 or more ☐ 2 ☐ 5 ☐

Thank you for completing this questionnaire, which is designed to provide us with a complete picture of the people who purchase Amiga User International and help us to focus our efforts on meeting the needs of our readers. Any information you provide will be treated with great care. It will always be safeguarded under the terms and conditions of the Data Protection Act. Amiga User International and ICD may make your information available to other respected organisations who may wish to send you offers of products and services.

Please tick here if you would prefer not to participate in this offer ☐ The Free Prize Draw is open to all UK residents aged 16 and over who return a completed survey. Closing date for entries is May 31st 1996. The winner will be randomly selected by June 30th 1996, from all surveys received by the closing date. The winner will be notified within 28 days of the prize draw date. No one connected with the survey is eligible for entry. No responsibility can be accepted for entries which are illegible or lost or damaged in the post. No correspondence will be entered into. There will be no cash alternative to the prize as stated. For notification of the prize winner send a SAE, after June 30th 1996, to: Amiga User International, AUI Reader Survey, Unit 2 Utopia Village, 7 Chalcot Road, London NW1 8LX.

XTREME RACING

Ex-Rover rager, Ashley Cotter-Cairns drives everyone round the bend this month, but has no truck with pinball wizards.

Black Magic £29.99

Yes, time to make a small bonfire of the Highway Code and throw on your well-thumbed copies of the AA Member's Handbook, How to Win Friends and Influence People, and 101 Things You and Your Friend Can Do with a Warning Triangle. For this is Xtreme Racing and, true to its name, you're going to have to be xtremely good (or perhaps xtremely Bad, à la Michael Jackson) to succeed.

Hands up if you think you could hold your own under the intense pressures of racing flat out, dodging the vile attempts of the other racers to turn you into guacamole and avoiding routes which either end up with your car up to its axles in Ready Brek, or going the wrong way around the circuit altogether! Right. You lot, sit down. You've got more chance of backing Shergar to win in the 2.30 at Doncaster with your Aunt Fanny on his back than of rising to the challenge of Xtreme Racing.

Okay, it's not actually that hard. Almost, but not quite. As with so many other 'racing car games with flashy graphics' offerings, half the battle is getting the camera angle to be as co-operative as possible. As usual the problem is that you get a good view of the exhaust pipes of your car, but not such a brilliant one of what's around the next corner (or even where the next corner is). This can be rectified to an extent by messing with the views, which are comprehensively flexible.

As is your car. Between each race of a season, you'll see a screen which resembles a mega-deluxe version of Kwik Fit, without the jerks in boiler suits. If you've won any money or picked any up while blasting around the courses, you can spend it here on upgrading various bits of your pride and joy. This should make your task on the track easier, you'll win more money, and life will be happy again.

Making initial progress is the tricky bit. As different cars have different capabilities, with varying powers of acceleration, roadholding, and combat strength, your first outings on the course will bring you back down to earth faster than gravity on an especially heavy day. Half the challenge is to work out which way to go. There are helpful arrows at points of potential crisis, but these often arrive just too late to stop yet another detour through the bottomless swamp or the river. And why can't I drive out into the sea without drowning? James Bond has done it.

Other hazards include arrows which bounce you off course, various bonus tiles on the ground which sometimes bestow a random benefit or penalty and, of course, the other cars. These are usually computer controlled, but if you can find enough people of like mind (no scruples) and who own an RS232 lead, you can link up and play split-screen with up to seven friends.



The other drivers will just as soon spit on you as shake your hand and this is reflected in the way they treat your vehicle. Bumping and grinding is guaranteed, but you probably won't enjoy it. You're not defenceless though, and can call upon the weapons built into your car every so often for support, in the shape of a cannon blast, turbo boost, or super leap.

Xtreme Racing has plenty of features and the multi-player options are nice. Graphics are okayish in a fuzzy kind of way, but at least move quickly enough. I particularly liked the choice of soundtracks: something for everyone's taste in music! On balance, Xtreme Racing is probably the best game

of its type. The playability is just the right side of frustrating on your own. With friends, it'll be a breeze. And drinking and driving will be positively encouraged.

VERDICT

Graphics:	73%
Sound:	88%
Gameplay:	90%
Overall:	84%

PINBALL MANIA

21st Century £29.99

Oh woe is me! The player is treated to yet another four tables of pinball fun from the company which has made its bread and butter by selling pinball games for many years. But look out 21st Century,

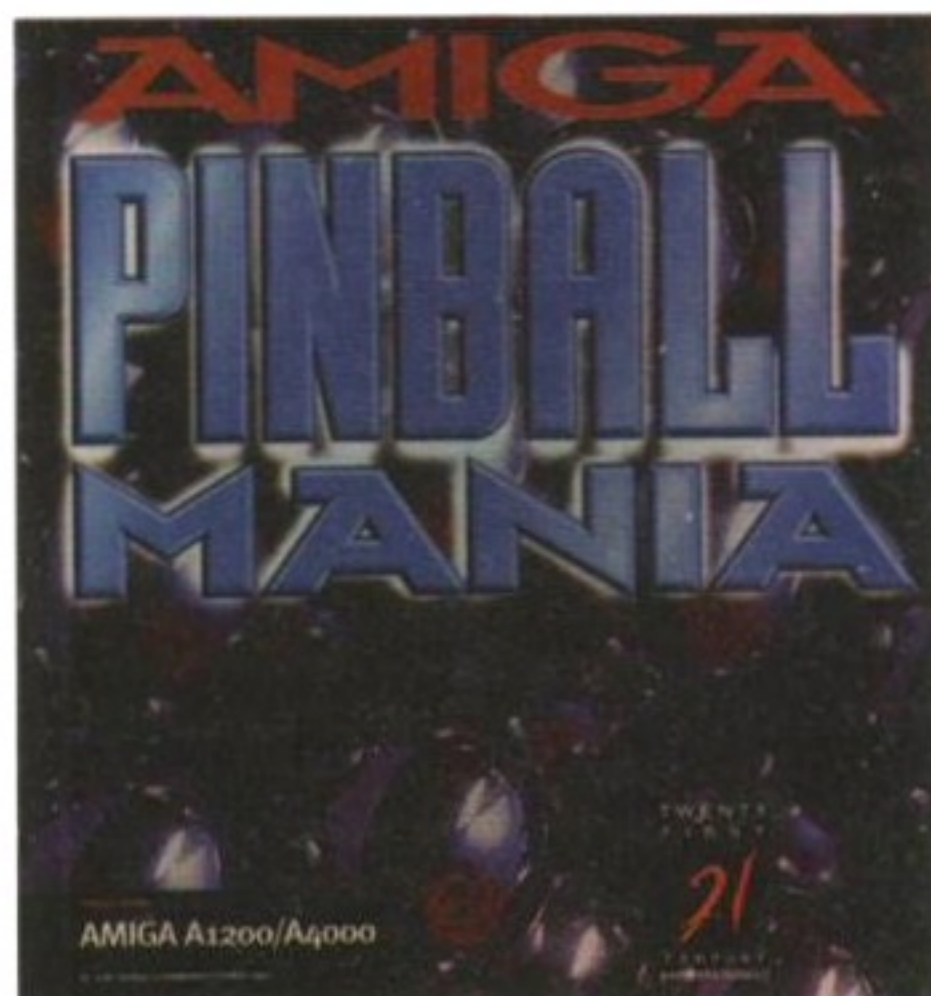
because if you don't pull up your socks, somebody else is going to muscle in on your territory, and you'll have to resort to lard and a few stale crumbs.

As ever, the four tables each

feature a theme and the graphics and features reflect the chosen topic. In Pinball Mania, you have to traverse the traps and flashing lights of the hair-raising Tarantula, go law-dodging in Jailbreak, leave the terraces in Kick Off (can anyone be sued over the use of this name?) and negotiate the confusingly named Jackpot, which draws upon casinos for its inspiration.

Let's start with the good news.

Jackpot is rather nice. I am well into casinos and poker and most of the essential elements are here, including the sampled "Madame et Monsieur" a croupier calls when spinning the ball in roulette and the four aces.



Jailbreak also looks the part. It is well laid out and colourful, with plenty to tempt you for a while. However, closer examination finds it lacking in that essential depth which was so powerful in the company's earlier offering, Pinball Fantasies.

Tarantula and Kick Off are, frankly, appalling. They are less attractive, badly designed and extremely dull. While the first two hold their own, neither of these tables would interest anyone who plays pinball tables for real:

there just isn't enough of a hook here to keep you pressing the start button.

The ball itself is disappointing. It's a lovely silver colour, granted, but this is flat and static, looking for all the world like it slides around the tables without rotating or rolling. Nothing reflects in its mock-shiny surface. Add to this a strange flipper action, which doesn't let you flip with any amount of decent power. Add in the odd occasion when the ball sticks to the flipper-tip and Pinball Mania looks like a flaw in the 21st Century pinball gem. Why has this 'flipper weakness' been in-

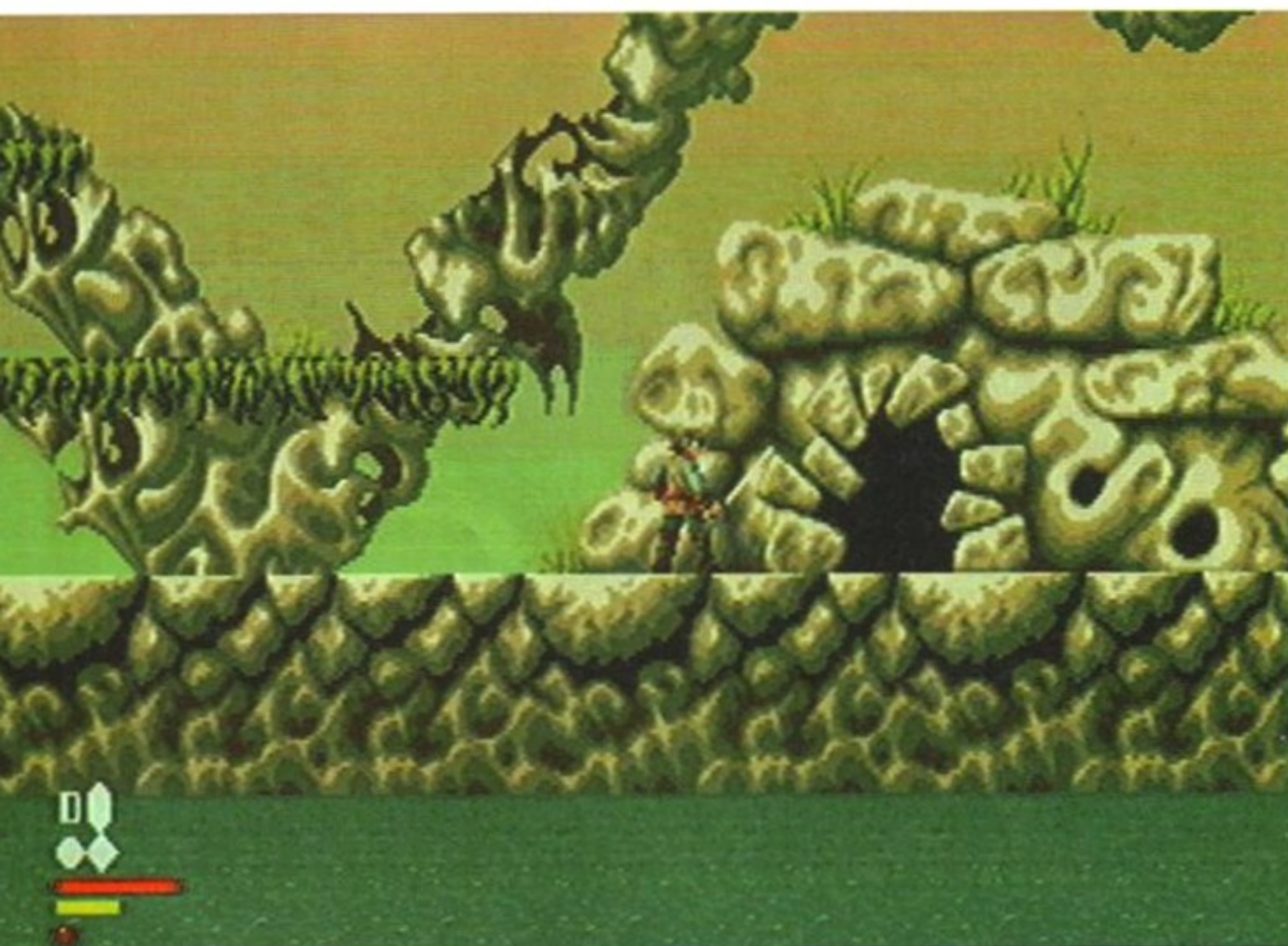
troduced? To make the game harder? It certainly hasn't made it any harder to switch off.

VERDICT

Graphics:	82%
Sound:	75%
Gameplay:	63%
Overall:	69%

ODYSSEY

Audiogenics £29.99



You begin the game as a human and I doubt that you'd be rejected from Airwolf auditions. You're mean, lean, and keen to bust ass (or something), armed with a sword, lovely flowing locks, and your wits. You must explore some of the islands on which the crystals are secreted. No easy task, this and made more difficult by the minions employed by your evil uncle to stop you from re-usurping him. There are all manner of elves, trolls, gnomes, and traps in your path to reclaiming the throne. Many respond to a quick assault from your trusty weapon, though violence is not always the best way to proceed.

at is making players think as well as react, and Odyssey will certainly do that. Puzzles are always solvable, but often taxing on your character's health, and your grey matter, to defeat.

Thankfully there is no time limit to make life more crappy than it already is and, when that damn intelligent boulder has run you down for the eightieth time, you're going to be thankful for small mercies.

Odyssey looks okay, pretty, even, but it's great to report that more attention has been placed on getting the playability just right. It's no pushover, but a competent player could possibly complete this during a week of very late nights, which is about right.

Odyssey has that "Oh come off it, ref, that eagle was way offside!" quality about it that makes computer games so damn compulsive. The best ones, anyway.

There used to be a sad Saturday night TV show (Animal Man?) in which an American actor could transmute himself into various different animals. It was popular and TV chiefs realised that there was a market for tat action series featuring sun-tanned, sinewy, silver-tongued heroes. These guys were always on the right side of the law, never had much luck with the ladies, and had a variety of stupid powers. Odyssey could quite easily have taken its inspiration from this old relic of syndicated pap. Though it's no crime if the spin-off is better

than the source of an idea.

Following hot on the heels of the 32-bit version of Exile comes a game which looks to share a lot of the other game's code. Odyssey is another good-looking platform romp from Audiogenic, in which your task (if you choose to accept it) is to defeat your uncle, the tyrant who has slaughtered your father - the King - and taken over his castle. To do this, you first have to discover the power locked inside various crystals and harness it, using your late friend the wizard's guidance to overcome the obstacles placed in your path.

Globes may be lit up en route to record your last point of safety. You can return to the last lit globe if you die, which saves a certain amount of swearing and joystick-against-knee beating. The key objective is to find the crystals. Once obtained, you are able to transform into different creatures and use their unique powers to make your way into, over and through things which were previously closed to you.

After a few minutes of exploration it becomes apparent that there is a lot more to Odyssey than meets the eye. One thing which Audiogenic has always been good

VERDICT

Graphics:	78%
Sound:	72%
Gameplay:	91%
Overall:	89%

Zeewolf 2

Airwolf... Zeewolf... David Ward grasps the cyclic control to put this follow-up chopper sim to the test.

Binary Asylum £29.99

A high speed helicopter with all the latest gizmos and weaponry. Is it Airwolf, the privately developed attack chopper of the famed TV series? No, this is Zeewolf, a privately developed helicopter gunship from Zenith Research.

Built to take on the forces of Ecliptico in a global corporate war, Zeewolf is the result of the convergence of technologies - metallurgy, electronics, and... well, there must be some plastic in it somewhere!

Apparently Ecliptico is a conglomerate composed of all the scum of the Earth - dictators, gangsters, polluters, and terrorists. Having been defeated by Zenith Research once before, they now seek revenge.

Unfortunately for them, Zenith have improved Zeewolf so that it can now remotely control other air, land, and sea forces, to wit, a transport helicopter or fighter plane, a tank, or landing craft.

Unfortunately for us, Zenith are the only power that can stop the bad guys, and there are only four Zeewolf helicopters available.

There are 32 scenarios to fight, either alone or with your drones, anywhere in the world. Zeewolf can operate from land or seaborne bases at a moment's notice, so this may require you to seek out resupply before tackling the mission.

The helicopter can be flown using either joystick or mouse. Rodent control is a touch more difficult to master, but gives greater accuracy in positioning the aircraft.

Your aerial weapon is posi-

tioned in the centre of a scrolling, perspective drawn (3D), representation of the terrain below you. Tip the ship's nose down to loose height and gain speed, or aim weapons at ground targets. Up for the opposite effect.

Landing is automatic once the undercart has been lowered, but positioning is vital if you don't want to end up in the drink when alighting upon the deck of a cruiser. This is where your helicopter's shadow comes in very handy.

A drawback of controlling drones, as I found out to my cost in one particular mission, is that while you are busy blasting everything in sight in your little tank, the bad guys can creep up on Zeewolf.

You see, you can only control one or other at a time. This makes life a bit harder. Life is never easy. Is it?

And just to really make sure you have a hard time, Ecliptico get an unfair range of arms too. Two types of mobile AA, AFVs, APCs, fixed AA batteries, ar-med helicopters in several shapes and sizes, VTOL interceptors, fast attack patrol boats and naturally plenty of troops masquerading as friendly forces.

These are not one shot and they're dead pieces of kit. Although

a well-aimed rocket or missile makes a good impression.

Ecliptico get naval forces, as well as land bases packed full of radar installations, bunkers, and other assorted buildings. Only the nuclear power stations cannot be destroyed.

Not a Sim

Zeewolf can hardly be described as a simulation game. Today's modern attack helicopters never miss their target, as they are equipped with target acquisition



Blast buildings to release the PoWs you've been sent to rescue.

and following equipment. This guides air launched weapons with unnerving accuracy, while the turret mounted chain gun can easily dispatch soft targets within a wide arc in front of the weapons' platform.

So Zeewolf's gun camera is suitably degraded. Targets appear within the sights, and the green light comes on, only when you have a reasonable chance of hitting whatever you are aiming at.

Selection of weapon to be fired is vital for the type of enemy target you encounter, and to ensure that you reach the end of your mission with enough ordnance to complete it.

Don't be like me and end up having to destroy an airfield's control tower with just one bullet left in the gun!

For each bit of enemy kit you

destroy you get paid a bounty. For each round of ammunition you have left over you get credited cash. Friendly troops rescued earn you a monetary bonus too, and the accumulated dollars are spent on building more Zeewolfs (extra lives).

Missions get progressively harder, but more lucrative, as you complete each one. So a successful pilot should be able to complete the game without worrying about losing lives.

It's quite some time since I enjoyed a shoot-'em-up, mainly because most rely on 'power ups' that conveniently litter the battlefield - not exactly realistic.

Zeewolf 2 is described as the "ultimate military action game". I don't fully agree with this, but it certainly does provide lots of military action for you to get your teeth into. Even for A500 owners, as this game runs happily, if a little slowly, on such machines.

Providing they have a full 1Mb of memory.

Conclusion

Zeewolf 2 is a good game, but the graphics are not up to today's expected standards. Okay, the Amiga is no Playstation, but this may well not wow the undecided buyer.

Sound is somewhat limited, mainly to gunfire and explosions, but adequate. Repetitive music is, thankfully, not present. As for 'value-for-money', in my view, Zeewolf 2 should be nearer to £20 than at its current price point. **AUI**

VERDICT

Graphics:	76%
Sound:	60%
Gameplay:	80%
Overall:	73%



APCs are easily knocked out, but AFVs do have a nasty habit of firing back.

The Amiga Answer Machine...



That master of the mysteries of the Amiga, Andy Eskelson, Guru of the groundbreaking question and answer, is here again with the magic response wand to wave over and waft away your problems and perplexities of a technological nature.

Answer Types

APPS	Programs etc]
VIDEO	Video related problems
COMMS	Communications
PROG	Programming
OS	Operating System
PRINT	Printer Problems
COVERDISK	Cover Disk problems
OTHER	For Anything Else

HARDWARE

Dear AUI,
I own an A1200 with Workbench 3.0, a SupraFax v32.bis modem, a dot-matrix printer, and a few other small add-ons. It's probably pretty obvious I need to upgrade my computer, the upgrades I'd be thinking of are as follows (in order of priority):

- 1Gb hard drive
- CD-ROM drive
- 4Mb RAM expansion

What, or even if, I buy the hardware specified is influenced by the fact that I hope I'll be going to university in a year's time to do Computer Systems Engineering. For this course I'll really need a PC, I'd be going for a Pentium. What I want with the hardware specified is compatibility between the two computers, because I'd be buying the upgrades for my Amiga firstly, but probably taking them off my Amiga and putting them onto my PC when I get to uni.

My modem's compatible, and if I use an IDE hard drive it will also be compatible, and I think the CD-ROM drive will also be. But I've heard that the PC can

only handle either. All devices being SCSI or IDE, this means that my SCSI CD-ROM for my Amiga wouldn't work at the same time with my IDE hard drive. Is this true and if so is there any way round this problem?

Then there's the memory problem, I could buy a bare board for my Amiga and then buy a 72-pin SIMM for the card. Will this be compatible with the PC, or do I need to go for a 30-pin SIMM, assuming I have any money left after all the rest. Please help me as I wish to upgrade soon.

Peter Holcroft
N. Ireland

Dear Peter,
You will find that prices of hard drives are so low now, that you will get a PC with the 1Gb drive fitted almost as standard (by the time you are ready to purchase).

I would go for SCSI devices where possible, the PC can have both SCSI and IDE devices at the same time, you just need to plug in another card. IDE devices are marginally cheaper, but not by enough to make any real difference.

Memory... it will depend on which motherboard design you end up getting. 72-pin SIMMs are becoming more common,

however, for the Pentium systems, memory is normally added in pairs of SIMMs, so you would have to buy another SIMM as well.

The other thing to look out for is that sometimes a certain mix of 30-pin and 72-pin SIMMs is possible, but there may be some incompatible combinations. You might not be able to plug in a pair of 4Mb SIMMs and a pair of 8Mb SIMMs into the motherboard, but two sets of 4Mb or two sets of 8Mb might be okay. You have to look at the motherboard handbook very carefully on this subject.

HARDWARE

Dear AUI,
I own an A600 with 2Mb RAM, and 1Mb external drive.

I'm considering upgrading to an A1200. I'm currently developing some P.D. Utilities, Clipart, Misc., etc. I have 5 questions.

1. Should I sell my A600 and buy an A1200 (second hand if necessary) or upgrade my A600?

2. If I should upgrade my A600 what is the best way for Graphics, Sound etc.?

3. Will my 1Mb trapdoor memory work on an A1200?

4. How can I get cheap RAM

(non-trapdoor), accelerators, 24-bit graphics?

5. Is it possible to turn an A600 into an AGA machine?

S. Flint

Dear S. Flint

Sorry if I've misread your name, but it looks like an abbreviation of some sort. Please everyone, when writing into Amiga Answers PRINT your name and address at the top of the page.

There is not much available for the A600 for expansion, so changing to the A1200 will be the most cost effective method.

Your 1Mb expansion will NOT work on the A1200.

I'm amazed at the number of letters asking where cheap products can be obtained. I don't know, you have to do what everyone else does, and keep your eyes and ears open. And the rule in life is you get what you pay for - and rarely is there such a thing as a genuine bargain. As the Spanish proverb that Bud Vennos is fond of quoting says: Take what you want and pay for it - in full. The A600 cannot be converted into an AGA machine.

COVERDISK

Dear AUI,
It seems that some of your readers are having problems using the diskspare device. I had none until I installed version 3.0.

As in the other versions, like v2.2, the author mentions that it is possible to read and write sectors 0-81, giving you a staggering 984k on a DD disk! But for some reason it failed to work until v3.0 of the device. I only used sectors 0-79 until then, giving 960k of storage.

The problem is that, if you are using a DSD-mountlist with HighCyl set to 81, the diskspare'd AUI SuperDisks appear as DSx:NDOS

There are a number of ways to fix this, like a second DSD mountlist with HighCyl set to 79, but the more obvious solution seems to update the diskspare device that comes with the SuperDisks... currently v2.2!

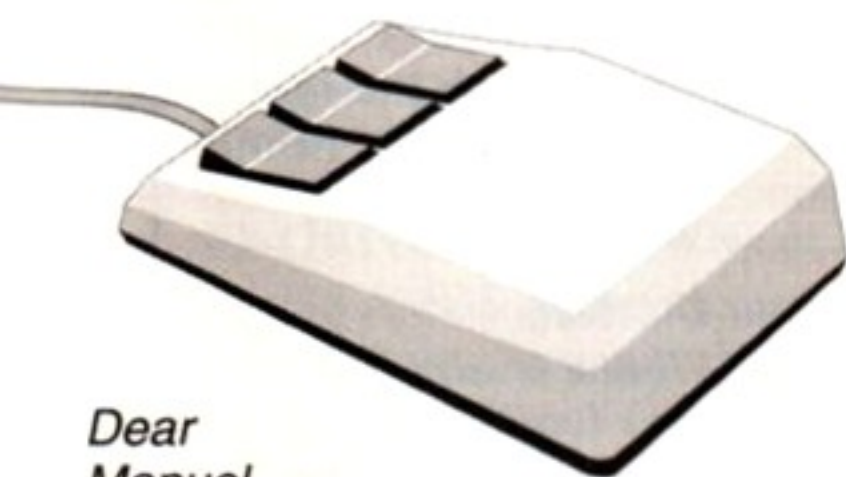
Therefore I've included v3.0 of the diskspare.device as found on the Fresh Fish 9 CD. You will also find an extremely useful archive utility that can be configured for any archiver available on the Amiga.

(AMINET SET
1/util/arc/GuiArc.Lha)

Excuse me if I wrote some typos... Dutch is my native language.

AUI, where no magazine has gone before...

Manuel Andre
Belgium



Dear Manuel,
Thanks for the information on v3 of diskspare. However, the point is that the SuperDisks come preset to use 79 cylinders, changing to v3 would not make any difference to this.

Diskspare is a very useful program to us at AUI, if allows us to fit quite a bit more data onto the disks. However, we have to be very conservative in how we use diskspare, as not all drives are equal. We use 79 tracks and leave it at that. So far we have not found any drive that will not read the disks. (Touch wood!). The major problem is with some readers inability to get to grips with diskspare. The documentation is first class, and I'm very hard

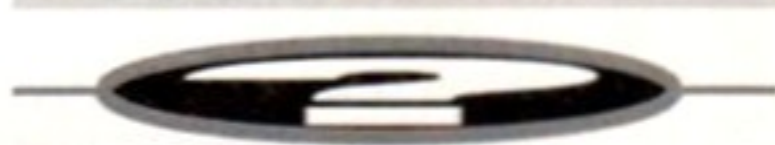
pressed to improve on it. The settings for the AUI disks are on the boot disk of the SuperDisk. (I admit that they are all archived away, but they are there if you have a dig around).

In general terms I would say that if a reader does not know how to set up diskspare, then they probably stand a good chance of messing something up, so leave well alone and let the SuperDisks unpack themselves.

We have already put GUiArc on a SuperDisk some time ago and v3 of diskspare is going on soon, but thanks for the thought.

Your English is fine, in fact it's a lot better than some letters I get from within the UK! I've said a couple of times, and I'll repeat it here. I don't care anything about the English used, providing I can understand the problem enough to give a reasonable answer I'm happy.

HARDWARE



Dear AUI,
I have been trying to find a solution to this problem for a long time. I have, among other things, written to another magazine without success. As it seems your AUI Answers section is larger than most other magazines, I hope you can take the time to answer my queries:

I have an A1200 (0S 3.0), Microbotics M1230XA 50MHz 68030, 50MHz 68882 accelerator with 4Mb onboard (32-bit), 4Mb (16-bit) PCMCIA card, 340Mb 3.5" internal IDE Drive, an external floppy drive, and a Goliath power supply (with all that hardware, I probably need it!!).

I want to get rid of the PCMCIA card and buy more onboard RAM. The 16-bit slows the machine down to a crawl and I need more for ray-tracing. Here's the (complicated) problem:

1. With the above set-up, the A1200 boots automatically when switched on or reset.

2. When I remove the PCMCIA only, the A1200 displays the purple Kickstart screen when switched on and the hard drive will not boot at all from a soft or hard reset. The same thing happens with or without the onboard RAM.

3. Without both the PCMCIA and the M1230 the hard drive

boots from a soft reset only. I understand this is normal of 3.5" IDE drives.

4. The Early Start-up Control screen shows the hard drive devices DHx to be available as the default boot device only when both or neither the PCMCIA and the M1230XA are installed CC0: is available as a boot device when neither are installed

5. The inevitable twist (to complicate matters further)! When I run the program FakeFast (which "fools" the Amiga into "thinking" that some of its Chip is actually Fast), the hard drive boots from a soft reset with the M1230XA installed, but without the PCMCIA. Someone suggested that the problem might be due to the HD Buffer Memory Type being set to "Fast".

Since the M1230XA does not become available until the machine is booting, the initial lack of available Fast causes the drive not to boot. This sounded possible, as when the PCMCIA is installed Fast is automatically available. However, I have verified that the BufMemType is set to "Any".

7. Is it correct that I cannot install 8Mb, or more, onboard and use the PCMCIA at the same time, because there would be an address conflict? Currently the accelerator and PCMCIA work fine together.

To cut a long story short, the A1200 boots correctly except when the accelerator is connected and the PCMCIA is not. How can I boot the machine without the PCMCIA and without using FakeFast? I would be extremely grateful if you, (or any readers), could find an answer as I can't expand my computer otherwise. The problem must lie with either the M1230XA or the hard drive. Could either be faulty?

I have another query.

I am currently using my third A1200 as the previous two have been replaced because of video problems with the TV output. Now I have a Microvitec monitor running DbIPAL. When the computer has been switched on for a while, thin vertical blocks and pixel-high horizontal lines of graphics flash on the display. This is most noticeable on the Workbench screen. I have heard of others with similar problems, but I have never found a proper solution.

I have discovered by accident an interesting "fix"

which appears to work. The problem seems to occur when bright colours are on screen, i.e. colours where the RGB intensity is set to maximum on some, or all the colour sliders (i.e. 255 on AGA or 15 on non-AGA), pure white (255, 255, 255) seems to cause the most flickering. Moving one or more of the sliders from maximum down to 254 or 253 (or 14 - non-AGA), causes the flashing to stop completely.

Has anyone else experienced this problem or knows any more about it?

Gerard Callaghan
Belfast

Dear Gerard,
I'm not going to be of much help here, but for what it's worth:

There is no reason why the M1230 should not boot with only chip memory available.

The fact that the A1200 does not boot with the PCMCIA AND the M1230 is very strange. IDE drives boot quite happily with one exception, sometimes there is a spin up delay and this sometimes needs a warm boot, or a modification to the interface (a cut in one of the ribbon cable traces). However, as the drive boots normally with the M1230 and PCMCIA card fitted this is not the case with your drive.

Do you see ANY disk activity on a cold boot? If so it might be that something in the startup sequence is trying to access either the M1230 or the PCMCIA and timing out.

It does appear that something in your system is looking for fastmem, so I would check all the mountlists as well as the BufMemType just in case.

Other than that I can only suggest that you reformat the hard drive and reinstall everything by hand one application at a time, starting with Workbench and testing carefully at each stage.

I think that the 1230 does not map its memory into the PCMCIA address space, but check with your supplier first, as some people have had a few problems with Microbotics equipment in the past.

You seem to have had some very bad luck with the A1200, but the problem that you describe does appear to be a fault of some sort. Reducing the level would tend to suggest that there is some form of distortion on the signal. Can you try another monitor as a test? That would indicate where the fault might be, the A1200 or the monitor.

HARDWARE

Dear AUI,
I hope I am not driving you mad with the problems I am having with my A1200, sadly they seem to be increasing. The more steps I take to cure the problems the worse it gets. Going back to the beginning, if you can bear it. I have an A1200 to which I added first an 'Amitek' External Floppy Drive. Next, I bought an 85Mb 'Quantum' IDE hard drive (at the time I couldn't afford a larger one!), and finally in the first stage I added a trapdoor Expansion Card which I bought from 'Gasteiner' with a 2Mb SIMM (again, that was all I could afford).

It all seemed to work OK, but I decided I needed more memory so I asked Gasteiner who said 'All You need to do is unclip the 2Mb and clip in a larger one'. I am not trying to stir it for Gasteiner, but I still have the letter on my file.

After I had done just that the computer crashed all over the place and I only sorted it after the BossMan at 'HiSoft' to whom I turned in desperation asked if I had anything plugged into my PCMCIA slot; because if I had, Commodore had programmed the 68020 chip to allocate anything over 4Mb to that device, whether or not it needed it. It was the first I had heard of it, Yes, I had recently bought an 'HiQ' Workstation which all worked from a 'Squirrel'.

Now I hope, knowing what was the main problem. My good friends down at First Computer, took back the 8Mb SIMM and fitted a 4Mb one, checked everything was, AOK, not only on my A1200, but tried all my bits in theirs to make sure it worked OK before sending me back home. It took them hours and there was no charge. But there was still some doubt in my mind about the compatibility of this board that relies on the onboard 68020 chip.

And so it has proved almost

everything I have installed crashes with monotonous regularity, usually after I have spent hours typing and in the middle of printing. Particularly, Wordworth 3.1SE, which is why I am typing this letter to you on my wife's 'Canon' Starwriter - lovely machine that always does everything you ask of it without any hassle whatsoever.

The crashes are usually preceded by the dreaded 'RED' screen, non-recoverable error, followed on re-booting with a variety of 'Software Failure' Messages:-

```
8100 0004 task 0034DIF0
8000 0004 task 0034B528
...task 0020328B
8100 0004 task 00351 D50
8036 ...task 00357218
8036 2250 task 00000000
```

AOAE - that only appeared once.

I am sorry some of them are incomplete, the damn things whizz off the screen before you can say knife. It really is

driving me bananas and unless I can pin

down the cause I am stumped. I just bought a 'ZIP' Drive to improve my storage and backup. It is brilliant, but oh dear, the problems I had sorting out the termination on the 'HiQ' Powerstation before I could get it up and running on the 'Squirrel' were just another irritation. I hasten to add these problems were nothing to do with 'HiSoft' or the 'Squirrel'. I hope I have already made it very clear that 'HiSoft' could not possibly have been more helpful. I really am getting desperate, do you think if I holed out the Gasteiner trapdoor Card and replaced it with one of the new 68030 Accelerator Cards it would cure the problems and if you do, which one shall I get?

Ian Aisbitt
North Yorkshire

Dear Ian,
There is an addressing range conflict with the PCMCIA slot as you say, but I don't know why the newer memory boards don't sort this out. It's very silly.

As you are using the PowerStation, I assume that you

have plenty of power available, so that rules that problem out. The only other thing that might be worth thinking about regarding power, is the quality of your mains. Do you have lots of flickering lights, or power 'brown outs' (sudden voltage dips) If not then the problem is elsewhere.

8000 0004 is Illegal exception
8100 0004 is Make library - no memory

They don't really mean much on their own, but together it is pointing to the memory that is causing the problem. You should have no problems with the 4Mb SIMM in the trapdoor. The trapdoor provides access to the CPU bus and, as such, it does not really use the onboard 68020. It just plugs more memory onto the bus.

The first thing to do is yank out the trapdoor memory and run the A1200 barefoot for a while. If the crashes stop you have found the problem area. Check things like contacts and chip seating. If all checks out and you still get problems when you reinstall, then the board is the problem. Did you have the same problems with the 2Mb SIMM? Are there any jumpers on the card that need to be set.

Accelerators avoid the PCMCIA address range by connecting the memory directly to the processor bus. This also gives a performance boost at the same time. The Blizzard boards seem to have a good reputation, but I would seek your friendly First Computers' advice as well, it really is nice to hear of dealers who are willing to put themselves out for their customers.

HARDWARE

Dear AUI,
I own a CD32 and SX-1, with keyboard and disk drive. I need a mass storage device, and am currently choosing between the IOMEGA ZIP 100 and the SYQUEST EZ135. I know that the SYQUEST will also use IDE, but unfortunately it's internal only, and there is no way it will fit inside the SX-1. The ZIP does not support IDE, so it would seem my only option is the parallel port. However, the parallel port will be too slow for my liking and my sampler is permanently placed there anyway.

My point is, I would

desperately love a SCSI interface, so that I could use the drive I buy at its full power. Of course, the SX-1 has no PCMCIA slot for a Squirrel, but next to the IDE port there is another expansion slot. In my SX-1 manual it says that this slot will allow me to connect a SCSI interface with no problems. Could you tell me where I can obtain the proper device for this slot and how much will it cost?

Also, would it be possible to bring back cover CDs? I don't mean just for the CD32, like what was done previously, but for the growing number of A1200/A4000 CD-ROM owners and people like myself with an SX-1. Unlike last time you COULD put your SuperDisk utilities on them. You could put on that month's (or any previous) PD demos and utilities, and how about the music you review? We could hear it for ourselves and readers would become even more famous (OK so I'm stretching it a bit here). I wouldn't mind paying any extra cash, and to be fair to the disk-only owners you could use an exchange scheme, or put out two versions of the mag. Sorry to sound so desperate, but I think the potential for using readers home-made MODS, pictures, utils, demos etc. is too large to be discounted easily. I know that I and plenty of others would send in material for use on the CD. But please, no Hawaiian shirts in the editorials, I was nearly sick the last time.

Duncan Hemingway

Dear Duncan,
I don't know of any SCSI interfaces for the SX-1. The port is there as you say, but the boards never put in an appearance.

Why don't you box up the Syquest? It's only a matter of shoving it in a cheap PC case, come to think of it you could put the whole thing, CD32 as well in one box. That's a nice 'hardware' project for you.

The Editor will have to make the decision on cover CDs. As you say there are a lot of CD drives out there, however the sad fact is that not many Amiga owners have CDs. We shall find out from the recent March reader survey. But I know he is considering the idea and thanks for the suggestion.

Meanwhile ask yourself this. What possible use is someone

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else's Mods? Or even pictures. You should see my pictures, if you want an oblongish box sitting on top of another oblongish box, then I'm the world's best. Would you like to see my pictures filling up the CD?

I can predict that if we did this someone would complain that we are filling up the CD with 'rubbish'. On the SuperDisks you get something like 4Mb of programs. Quite enough to keep most people happy until the next issue. Don't get me wrong, CDs have not been ruled out, but it is a decision that will have to take into account a lot of factors before one is done again.

HARDWARE

Dear AUI,
Thank you for your reply to my letter to you, your reply to mine crossed in the post with my second one detailing how I had satisfactory resolved my printer problems. Many thanks anyway, it is nice to have a Technical Expert who is prepared to make the time to answer poor idiots like me no matter how busy you are. In the final analysis, no accelerator boards being available, I swapped my 8Mb SIMM for a 4Mb SIMM and all my incompatibility problems with the Squirrel in the PCMCIA port are now thankfully cured.

I was able to acquire second-hand, a second A1200 which I want to give to my son for Christmas - it is an unexpanded machine - the seals were all intact and it had only ever been used for game playing (what a waste!). I noticed when I got it that although everything seems to work OK, when it boots up from the floppy disk, everything has a distinct yellow tinge which distorts all the colours - I took out my expansion card and my hard drive and installed it onto the 'New' A1200 - everything works OK except that all the colours are distorted and no amount of 'playing' with the palette on 'Prefs' made any difference - I took the hard drive and my trapdoor expansion card out and put it all back into mine and everything was perfect - I had to restore the palette to Default on my own and everything was back to normal.

Any ideas please? This new A1200 is to replace his trusty

A500 which is now well past its 'sell-by date' and I don't want to give him a faulty machine. When it starts up all is well - it isn't until you put the first floppy in the drive and boot-up that you notice this strange yellowish, pale green colour - is one of the on-board chips faulty, if so can I fix it myself or does it need to go to a repair shop?

Ian Aisbitt
North Yorkshire

Dear Ian,
I'm pleased that you sorted out the printer problems. I got slightly behind from late July due to a personal problem hence I was a little tardy in getting the reply to you. However, I caught up with all the mail a few weeks ago so things should be back on track.

The yellow tinge could be anything, most likely a video problem. Can you try a monitor and a TV? If the same problem is on both this will point to the video circuits being the problem area. If a monitor is okay, but a TV is not, then this indicates that the modulator is the problem.

Try swapping the power units as well. A low output supply might cause this problem, but it is unlikely. I think that the services of a repair shop is going to be needed, as it is highly unlikely that there is anything that you could do yourself.

HARDWARE

Dear AUI,
Having owned my Amiga A500+ for a couple of years, I decided to use my computer for more serious tasks. I obtained a 1Mb memory upgrade and a Star printer along with some productivity software to help me along the way. My friend, who owned an A500 WB1.3, then sold me his GVP A500-HD8+ hard drive for a very reasonable price. When I read through the instructions I got the impression that it would work with my A500+ without any problems. My friend removed the WB1.3 from the boot partition and placed WB2.04 in its place.

He then copied the GVP software driver GVPScsi into the expansion drawer of the Workbench on the hard drive. When I returned home I found

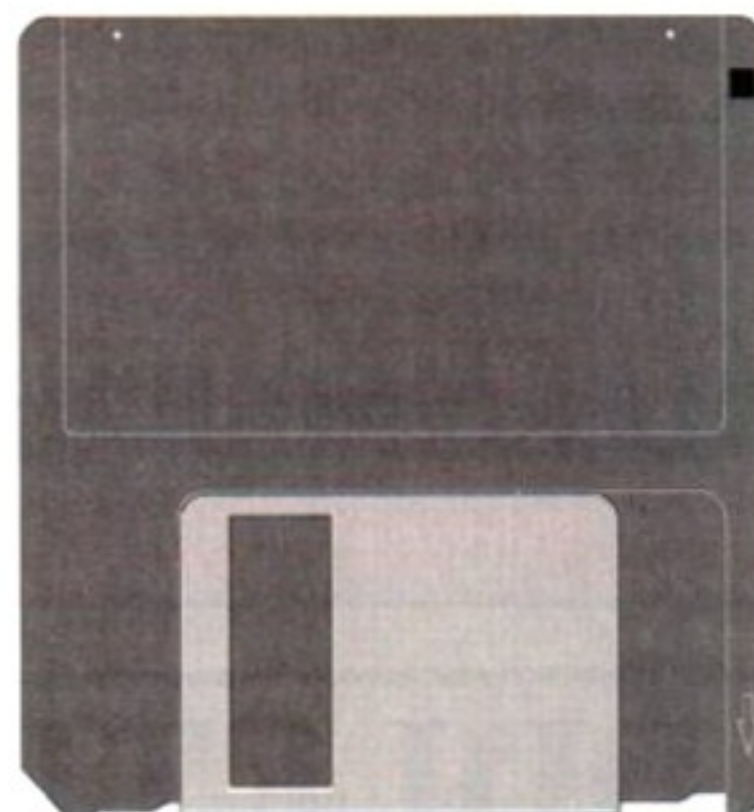
to my horror that the drive did not work. A requester appears stating that the scsi.board has been ignored. When I click on 'continue' nothing happens, the requester reappears.

I then returned to my friend to test the drive on his A500, but this time a request states that Kickstart v2.x is required to now work the drive. If a disk is inserted that boots Workbench, the hard drive is recognised. On my machine this does not happen, inserting a disk does nothing as the machine has 'crashed'.

My system configuration is as follows: A500+ 2Mb RAM, Zappo external drive, Star LC10 Printer, Amstrad colour monitor.

If you can help I would be most grateful.

Mark Donaldson
Lanarkshire



Dear Mark,
You are quite correct in that the HD8 should work on the A500+. I think the problem is that the GVPScsi driver, which should be GVPScsi.device should live in the Devs: directory. You should be able to recover the situation by booting from floppy and then re-installing the hard drive software.

The only other thing that you may need to check out is the ROM version of the HD8. Some of the early models, while fine with WB1.3 A500s, did not like the WB2.0 A500+.

HARDWARE

Dear AUI,
I am writing to you concerning a lazy 68881 FPU I have supposedly installed on my machine. The FPU is a part of a 'Mach 2, accelerator board (which is a little known board by Rossmoeller and of German origin), it was distributed by

Sysons Associates.

The problem is that, although on startup it claims to have installed correctly, and to have installed the Mathieee.resource, I cannot get it to function. On examination with Sysinfo, I noticed it recognised my FPU, but would not give it a Mflop or MHz reading.

Also, when I try and run the FPU version of VistaPro Lite, it fails, giving me a Guru No. 8000000B (which is a CPU exception, I believe). The CPU version of Vista runs fine.

I strongly suspect the libraries to be at fault, so I have included a dump of them. I have also included a copy of my Sysinfo dump.

My system set up consists of an old A500 with a 2.04 upgrade, 3Mb total RAM (1Mb chip), a GVP HD+ 52Mb hard drive, and the accelerator.

Arron Hawke
Bracknell

Dear Arron,
Sorry to say this, but I don't know anything about the Mach 2. However, the normal IEEE math, libraries will use the FPU. Run the Showconfig utility, that will find the FPU if it is there.

Other than that you will have to take this up with the supplier.

COVERDISK

Dear AUI,
First, many thanks for your reply to my letter of some months ago, giving me useful advice on how to set up my printer driver. I have also taken your advice and invested in a small hard drive which has made it much easier to run Wordworth. My set up is an Amiga A600 running Workbench 2.05 with a 1Mb trapdoor expansion card, and a 30Mb hard drive with two partitions, Workbench and Work.

My problem now is that I am having difficulty with SuperDisks 67 and 68 that came with the October 1995 edition of AUI.

The first problem is with installing the disks to hard drive. When I try to specify the path I get the message "Invalid path input - the disk or directory does not exist". The prompt screen recognises my work partition i.e. it says that

DH1 is 25Mb, is 38% full, has no errors, is read/write, and is called work. The path I entered was dh1:work/. I also tried this with various spaces and with various combinations of lower and upper case letters (although I believe that the Amiga is not case sensitive when it comes to defining paths.) I even tried setting up a drawer called AUIOCT95x and specifying that in the path i.e. dh1:work/AUIOCT95x/. Could you please help me on this? I am sure there must be something quite simple that I am doing wrong or failing to do.

I have also tried to install the programs to floppy. For example, I installed Willy's Weirdy Nightmare, inserted the disk with the installation screen showing as per the instructions and entered "I". The disk would not autoboot, but I was able to read the documentation by double clicking on the relevant icons. However, when I clicked on the program icon I got the message "AMOS program failed error 80000003".

I also wanted to install the virus checker. Having failed to install it to hard disk I again installed it to floppy. This time I was unable to read the documentation and got the message "unable to open your tool Virus Checker Guide". When I double clicked on the Virus Checker icon I got the message "Could not allocate a structure for Buffers. Either unpack.library is not available or the wrong version is installed or there is not enough memory".

The other program I would like to have tried was Super Pass. The instructions on page 9 of the magazine would suggest that it is on 95b, but I cannot find it there.

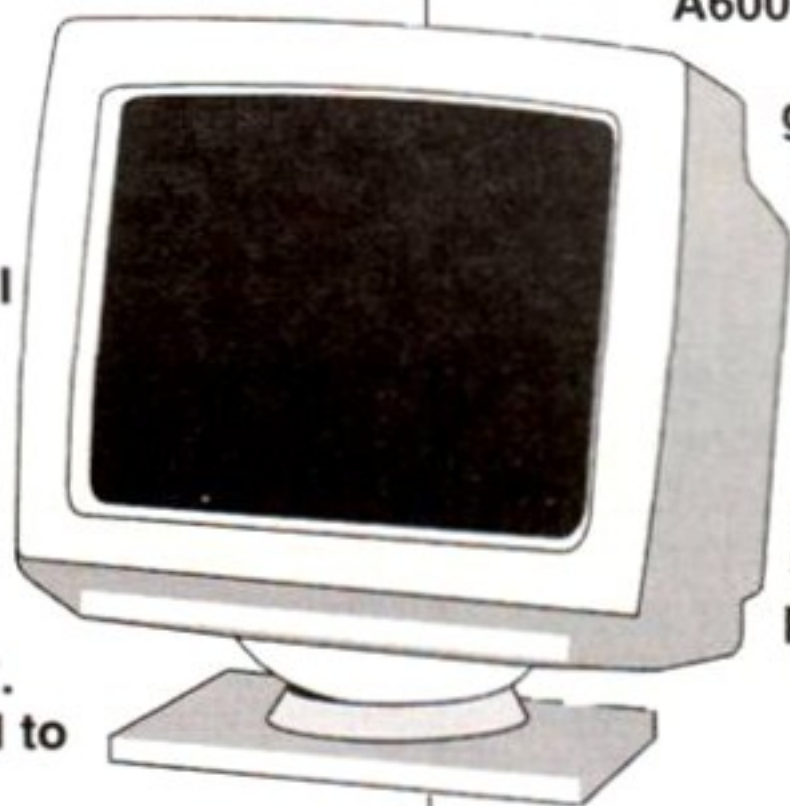
Finally, I would just like to make a plea that the disks be kept as simple as possible to install. When I first started buying AUI a couple of years ago, I found the cover disks very difficult to install, but over the last year or so things have been much easier and the programs have been very high quality. I hope that my present

difficulties don't herald a return to the "bad old days".

A problem with many cover disks (not just AUI's) seems to be making sure that programs e.g. libraries and fonts, are in the right place, and assigns (whatever they are) set up correctly. I think it would be helpful if AUI could run a piece on this for the non-expert user such as myself. I realise that you could not hope to cover all aspects and all circumstances, but you could at least give guidance on the general principles of handling programs on floppy and hard drives.

I was also wondering if you could recommend a good book written in plain English which could help. I was thinking of buying one of the Bruce Smith books, but do you know of any others, bearing in mind that they would need to apply to the A600?

I should be grateful for your advice on the above, and I enclose an S.A.E. in case you are unable to reply in the magazine, but could give me some quick pointers in writing.
Colin Styles
Oxon.



Dear Colin,
Your points about the SuperDisks are well taken, and have been passed to our SuperDisk guru who will make every effort to ease the installation process. In fact, you may have noticed a distinct improvement recently.

Your problem is so simple, and it does highlight a need for a quick and dirty article on the subject. I'll make it the subject of the next Toolbox article. All that is going wrong is the way that you are thinking about your disks and their names. This is not surprising as the Amiga can have many names for the same device. The rules are quite simple. A name followed by a colon ':' is a device. This device can be a real device, or a virtual device. I have covered this in the Toolbox series so have a read of the Toolbox covering Assigns for some examples.

DH0: is a real device, it is the first partition of your hard drive. DH1: is a real device, the

second partition of your hard drive.

WORK: is a virtual device, this is the NAME of your second partition, just like the name of a floppy. It could be any disk or partition. So you could have entered the path in one of two ways. DH1: only, or WORK: only either would do the job.

Entering DH1:Work/ is telling the Amiga to look on drive DH1:, in the directory Work, which of course you do not have, hence the error. If you think of the path as the icons it all becomes a little clearer, see if this example makes more sense:

Disk-Icon-Name:drawer-name/drawer-name/...

Now the confusion increases when a device has the same name as a drawer, but because of the colon this is perfectly okay, and very useful.

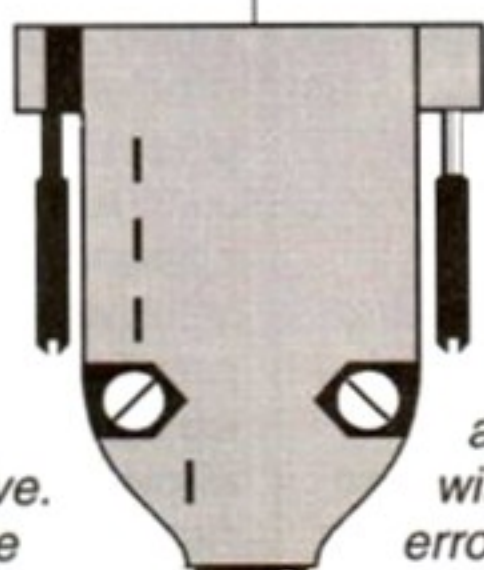
Some time ago I ran out of space on one of my hard drive partitions. A program I was using needed to install in one directory so I had to make some room. I decided to move the Utilities drawer somewhere else. (Onto another drive partition in fact) This could have caused me lots of problems, but because there is a virtual device called Utilities: (note the colon) all I have to do was tell the Amiga where the new location of the utilities drawer was, assign that to the virtual device Utilities: and the Amiga did not know any different.

The old location was on disk 'Primary' in the utilities drawer. So the virtual device Utilities: was set to Primary:utilities (note that the disk name 'Primary' is a virtual device). I moved the drawer to the disk called 'Riker' and reassigned the virtual device Utilities: as Riker:Utilities.

Utilities: can be used as if it were a disk in its own right and the Amiga O/S will be able to locate the files. It also saves a lot of typing! Sometimes programs can be 'nested' very deep in the disk structure. I would get fed up with typing:

'System:Protext/AUI/Answers/ReadersLetters/Letters_to_do'

every time I wanted to access a reader's letter. I've just assigned a virtual device called AnswersTXT: which corresponds to the path above. All I do is type AnswersTXT: then the filename and I can access the file quickly and without half a dozen typing errors.



The Virus checker will install to hard drive, when you enter the correct path, so that should sort out your library problem.

You are the second person the comment about the Willy's Weirdy Nightmare who has an A600. The documentation states that it does not work on the A500, and has not been tested on the A600. As the A600 is almost identical to the A500 I'm not surprised at the error. I think we will just have to state that WVN is not compatible with the A600.

Super Pass is on disk 'e' Sorry for the confusion on that one.

COVERDISK



Dear AUI,
I just recently installed a 540Mb hard drive in my PowerStation. I had to put the SCSI driver on a floppy and boot with it to get my Amiga to recognize the hard drive. My question is how do I expand your cover disks directly onto my hard drive? And if it's not possible, can the intro be made to run off Workbench, allowing me to mount the SCSI driver before loading the SuperDisks?

I also read in somebody else's letter about a diskspare.device that would allow me to access the disks directly. Where would I get a copy of it?

Unreadable Signature

Dear Unreadable,
Please type your name and address on your letters, I really don't like addressing readers as 'unreadable'.

In your case you will not be able to expand the SuperDisks directly, but unarchiving them a file at a time is easy. (This is the method that I use normally). Diskspare is on all the SuperDisks that need to access diskspare disks. The full archive is on

SuperDisk 49, and the latest version is coming soon.

If you unarchive the file commands.lzx which is in the C: directory you will find the mountlists and diskspare device in all their gory details.

COVERDISK



Dear AUI,
On SuperDisk 57 you gave away Lzx. My friend Ian and I have read the docs and tried nearly everything we can think of to compress an animation done in DPaint3, but we can't. Please could you write a few examples to help us.

James Sell
Norwick

Dear James

No problems, this is what you should do:

Place a copy of Lzx in your C: directory, or in the same directory on which you are going to be working. I normally use the RAM directory for this kind of thing. So assume that Lzx is in your Ram: directory. Copy the file that you want to compress into the Ram: directory as well. Open a shell window and CD into Ram:

Assuming that you have one single file to compress the format of the command is:

Lzx a (archive name) (file name)

So if you have a file called 'file1', and you want to compress it into an archive called 'test' the command would be: Lzx a test file1

To compress multiple files use the format: Lzx a test file1 file2 file3 ... To unarc the files use the command: Lzx x test (assuming that you want to unarchive the file created above.)

COVERDISK

Dear AUI,
Many thanks for your help with my recent query about problems with loading SuperDisks.

Having read your answer, I tried again to load the disks and still had the same problem with disk 2. As I said in my letter, disk 1 boots Okay and no matter what, disk 2 would not be recognised and could not be accessed.

Your mention of 'Diskspare' set me searching through my hard disk for the program and I did not have it.

I eventually found a copy of Diskspare in the depths of my disk box and after copying the files that you mentioned into my Devs and Devs/DOSdrivers directories, I was able to access SuperDisk 2 without problem.

Mike Hill
Gainsborough

Dear Mike,
I'm glad that you have sorted out the disk access, but I'm still puzzled why it does not work when you boot from disk 1. I've tried here and it all works without any problems.

Disk 1 should install diskspare and read disk 2 in much the same way as you have done manually.

COVERDISK

Dear AUI,
I have an Amiga A1200 with a 200Mb hard drive and a 2Mb upgrade with a 33MHz FPU. I also have a Zappo CD-ROM, and an external floppy drive. I have a Citizen Swift 90C, and a Sharp TV/monitor. I have Workbench 3.0 and my Zappo installed with Overcd v11.2. I have purchased the October issue of AUI and copied the SuperDisk to my hard drive. I read the item on amicdfs and started to install it. I copied the amicd file system to L:. I tried to copy 'cd0:' to DOSdrivers, but found that a file called cd0 was already in DOS drive, so I renamed the amicdfs cd0 to cd1 and installed it. I then checked cd0 and cd1 with the tooltypes and found that cd0 only had activate=1, unit=0, and cd1 has device=scsi.device, unit=2, control=l, activate=l.

Please can you tell me if I can modify my tooltypes to make amicdfs work with the Zappo CD-ROM. as the Zappo is not a SCSI system.

Dave Price
Kent

Dear Dave,
A very short answer to this. The Zappo is not a SCSI device, amicdfs requires a SCSI drive. The two systems are incompatible.

COVERDISK

Dear AUI,
I own an Amiga A1500 3Mb and hard drive. On your SuperDisk 53 you had some printer drivers. Now I've put them into my printer device drawer on my

hard drive. But every time I load one of the devices and go to load a software package on my hard drive the Amiga crashes. How do I install the printing device without my computer crashing out? Please can you give me an answer as this is racking my brain.

Anthony Pink
Hants.

Dear Anthony,

Sorry to say that I don't have any information on these drivers apart from what was on the SuperDisk. Some of them do seem to cause problems. Try testing them individually, possibly some will work and then you can discard the others.

OTHER

Dear AUI,

First my system:

A1200, 28MHz Viper Accelerator (very nice!), 4Mb RAM, 64Mb (Disk expanded to 100Mb), 2.5" hard drive, Commodore 1084S monitor (also pleasant, though prefer multisync), Commodore external disk drive, Epson Stylus 800 printer (having problems with blocked, non-replaceable, head nozzles) Now I, like many people, wish to get connected to the Net (does anyone really use Information Superhighway except in sarcasm?).

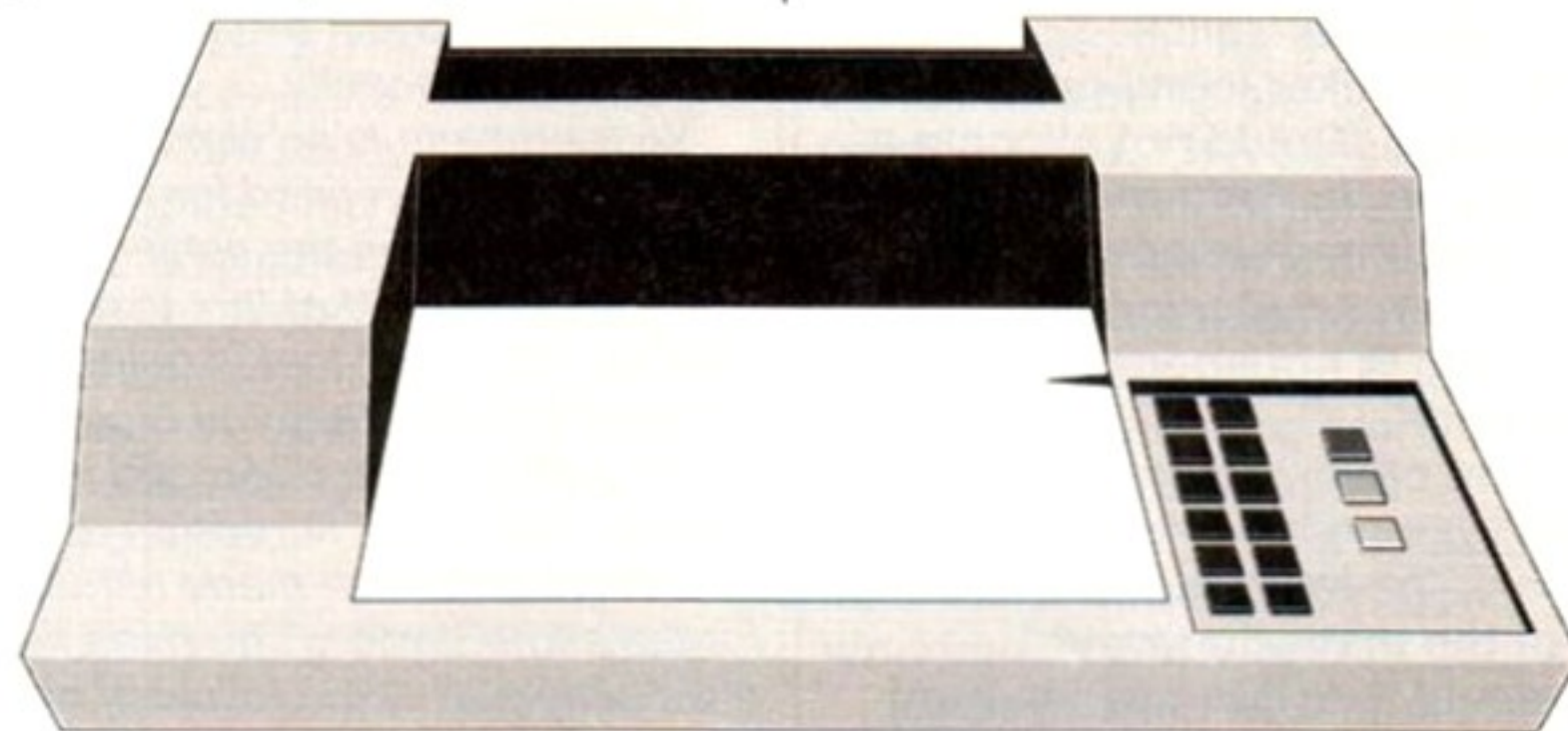
I've seen an advert for the Speedcom 28,800 bps v34 for

(I believe) - can you give me more information (like a contact number) as my local shop charges commission, so it would be better for me to contact Aladdin direct.

That's the reason why I wrote to you, but on a different (and exceptionally frustrating) subject: requesters. Only one type; that of WBPatten fame. It don't work any more! I click on Choose Image, the requester loads, and stops. Resizing works, but the buttons don't move (see above). The requester is now frozen can't close or use. That's the only type of requester that does that font, screen-mode, 'normal' file requesters all work! I use ReqPatch, but that's not it; after several formats and reinstalls of my System partition, I think I've traced the problem down to the asl library, but installing other versions just result in the expected "Need higher version". This is been going on for about a year now! I am computer literate, but this is beyond me! Help!

Could you please also tell me where (on the Net, PD library, ANYWHERE!) I can find the Mac ROM file for Shapeshifter as I really can't get access to a Macintosh? I have phoned PD libraries, but no one can help. All the mags say the program is cool, but I can't find out! I'll enclose a disk - please send it to me: I promise (honestly!) not to tell anyone where I got it from!!!

Mark Dickinson
Hampshire



£150. This seems like good value - is it? Or are there better modems (for around that price)?

What is the 'average' connection charge for the Internet? My local service provider charges £12, but with no on-line charges - is that about right? The provider is Aladdin, based in Southampton

Dear Mark,
I've not come across the Speedcom so I don't know how it performs. Modems do vary, and some have problems connecting to other makes. I would recommend that you look at the Courier Dual Standard, it's expensive but it is the most common modem used by service providers.

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The charge is reasonable, but as to a contact name, why don't you just look in one of the many Internet mags on the newsstand? Aladdin can be contacted on 01489 782221.

I would suggest that you run up Snoopdos and see what WBpattern is looking for. I expect that it is missing a file.

You can get the ROM files direct from Apple. They will come neatly protected inside a Powermac computer. You have got a damn nerve asking me for illegal sources of software. Perhaps you should be paid a visit by the Federation Against Software Theft (FAST).

OTHER

Dear AUI,
I have a really annoying problem with my CD32/SX1 please help me. My set-up consists of CD32, SX1 - revision 2.0, Extra memory - 4Mb 32-bit 72-pin 70ns SIMM (make Topless 34524), Internal 2.5" IDE hard drive - SEAGATE Model ST9145AS size 100Mb, External Drive - Amitek 3.5" 1Mb, Monitor - Philips CM11342. I am using - Kickstart 40.60 and Workbench 39.29

The problem first started when the extra memory was fitted, prior to that everything was fine. Initially everything was fine for about 3 minutes then everything froze and the CD32 had to be reset, after that the hard drive would not boot up. I first of all thought this was a power supply problem (I was still using the original one) so I got a DATEL Goliath power supply (200W, 20A at 5v, 8A at 12v) and plugged it in. The hard drive still didn't boot up, I worked out that it had become corrupt during initial Freeze/Reset.

As there was nothing much on the drive I repartitioned and reformatted the drive. After reinstalling Workbench the HD booted OK and all seemed well. Then the problem reappeared with the CD32 freezing and having to reset. This mainly seems to occur either initially booting up when sometimes the bootup stops before the Workbench screen appears or it all freezes just after workbench has loaded. When I have successfully booted up

sometimes after 5 or 6 attempts everything seems fine then it all freezes again occasionally it unfreezes again but more often a reset is required. The freezing seems to occur when one of the following is happening copying from floppy to hard disk (using DOpus), when running install scripts or when opening a drawer which contains a lot of icons/programmes it all freezes up somewhere between 30% to 50% of the way through. This problem sometimes (rarely in comparison) happens when booting from floppy and never whilst using NONDOS disks i.e. games.

I wondered if it were to do with Max Transfer Rates so I adjusted them to 1xfff (from 1xffffff) this may or may not have made a difference it hard to tell but I think its got slightly better, but I don't know enough about this to play around with them too much.

With the hard drive disconnected everything is fine, and with memory chip removed HD seems OK. I have also exchanged the SIMM for a new one, but still same problem. Please help this problem is driving me spare.

Duncan Gow
Dumbartonshire

Dear Duncan,
The last paragraph of your letter is the most revealing. 'With memory chip removed HD seems OK'. This would indicate that the problem could be to do with the data/address bus. On the other hand, the drive will also make use of the bus. The only thing that I know of that could be worth checking out is the power to the SX1 and CD32. Most of the power is carried via the edge connector and this can sometimes have a high resistance and thus generate an abnormal voltage drop. Directly powering the SX1 and CD32 is often the cure as is the case here at AUI. This requires the services of an engineer, so don't go messing about unless you know what you are doing.

OTHER

Dear AUI,
My problem concerns the distortion of printed pictures on Wordworth 3.1SE. But first my

system: an Amiga A1200 with 2Mb RAM, hard drive, Citizen 120D+ 9-pin DMP.

Now, back to my problem. I have many documents which I have created using WW3.1SE with IFF graphics placed in them. The problem is this, although the graphics look all right on screen, when they are printed out they become distorted. For example, a circle retains its correct width, but becomes squashed heightways. This problem occurs all the time using both the EpsonX and Digita 9-pin Pref Drivers.

I have tried to compensate for the decrease in height by doubling the height of the graphics on screen, but this still does not work. I got the idea for this from the circle draw tool within Wordworth itself, when on screen it always appears as an oval, but when printed is a perfect circle.

Please help me solve this problem. I have enclosed a SSAE for prompt reply, as I



would like to use some diagrams placed in documents for some GCSE coursework which needs to be handed in soon.

Nick Botham

Dear Nick,
There is no real easy way to overcome this problem, it will require quite a bit of work on your part. The problem is all to do with screen resolutions, and printer resolutions. The trouble stems from the screen that you are looking at. It is not square, and

what's even more of a problem is that it is not linear. You might have a screen size of 600 dots across by 400 dots down. Now if it were 600 by 600 everything would be in the correct proportions. What you have to do is to scale your graphics to compensate for the screen resolution that you used. In the case of a 600 by 400 image, you would need to apply a 33% scaling factor. It is often easier to set up a screen with a 1:1 scale factor and work within that, or use the drawing tools within WW as they will compensate for the screen resolution.

OTHER

Dear AUI,
With reference to Mr. R. G. Butler Letter (Sept 95) I tried to find a suitable power supply for the overdrive HD, and found on testing the supply to the drive

connector that it was +12 volts to the centre connector, not 5 volts, and the connections to the drive port is from pin 23. The 5v supply is pin 12, although it is clearly marked on the box "includes a 5v 1A power supply", (which it did not). I obtained a variable power supply (1.2A) from Argos (Cat No: 982/2667) and it works okay, but nothing happens until you switch on the A1200. Why is this?

Also I have a problem with ghost files on locale.

In Prefs/locale I have GB, UK, and US, but I have two ghost countries Osterreich and Canada.franÁais. If I click on them I get dos error code 20 'object not found', and if I load Opus and go to the locale/countries drawer and delete them, then open and close any other drawers they reappear in the locale/countries drawer. I even copied the original files to this drawer and they both appear (ghost and original with the same name

which I didn't think you could do). I have checked my start-up, RAM etc. and can't find any reason why they keep reappearing.

D. Hope
Lanarkshire

Dear D. Hope,
I hope you know what you are doing. The Overdrive may well have internal regulator circuits that convert the 12 down to 5 volts. If it stated that a power unit was supplied, why did you not complain? There are various reasons as to why it does not work until the Amiga is switched on, ranging from needing the power from the Amiga, to looking for control signals, it depends on the design of the equipment.

What on earth do you mean by 'ghost' files. They are just simple files that control the format of things such as the date. They are not really 'clickable' files. They delete fine from the Shell and Workbench here. Perhaps you have managed to set the protection bit. You are correct in that you should not get two files with exactly the same name. You have not really given me enough clues.

FEEDBACK

Dear AUI,
I was reading AUI November Andy Eskelson Answer Page and I took note of a number of problems on SuperDisks excess. My system is a A500 WB1.3 with GVP hard drive, 2Mb Trapdoor upgrade 2Mb I have no problem excessing your disks

Under 1.3 there is nojoy but I purchased an emulator disk Wb2. I have a number of SuperDisks which I kept for future use and when I got the emulator disk I could use them. The instructions say pick a letter and press return. Return does not work, PRESS ENTER instead and access is gained.

E. Cooper
Oldham

Dear E. Cooper,
Thank you for the feedback on the SuperDisks. This may be very useful for other readers who have older Amigas and have upgraded their Workbench.

FEEDBACK

Dear AUI,
Reference to A. Hopson's letter in November AUI Answers about converting Archimedes graphics to IFF. There is a PD program called Sprite2IFF that will do the trick. It can be obtained from:

A.P.D.L.
39 Knighton Park Road
Sydenham
London
SE26 5RN

The disk number is B288, costs £1.50, and will have to be run on the Archie as it is an Archie disk and works on RISC OS 3.1

Alternately contact the author.

Andrew Bennett
203 London Road
Chesterton
Newcastle
Staffs
ST5 7HT
or E-mail:

lunchtime@arcade.demon.co.uk

Credit for this information to a pal from work who as an Acorn 3010 and with whom I exchange a lot of pictures etc. Hope this helps Mr.Hopson or any one else with the same problem.

Pete Fox
Doncaster

Dear Pete,
Many thanks for the information, I'm sure it will be of interest to quite a few readers.

FEEDBACK

Dear AUI,
Please ignore my earlier message (via e-mail), I have solved the problem of installing the coverdisks to Zappo/Overdrives myself. All that needs adding to the startup sequence is:

cc0:<return>

"<return> (note the space between the quotes)

I put these lines at the END of the startup-Sequence of SuperDisk 69 (a copy of) and I installed disk 'a' in about 10 seconds. In theory anyone with this problem should make a backup of the bootable SuperDisk (only applies to the more recent, HD installable

ones) and add the above two lines to the end of s/startup-sequence (using ED or similar, I used Transwrite Jr.). I will not try to send you a copy of the AQ (HD install) files over the Internet (as it is illegal). If you use this solution and print the fix in the mag, could I please have my name mentioned?

Sorry to read that Gideon Overhaed is moving to an inferior mag about an inferior O/S for an inferior machine. AUI SuperDisks have undergone a revolution in the last few months! QUESTION: Now Gideon is working on a PC (spit) will he put down the Amiga in his work instead of slugging off PCs in AUI?

I hope that I have been of some help,

Andrew Clarke.
Leicestershire

Dear Andrew,
I'm sure that your cure for Zappo owners will be very much appreciated. Apart from unreadable names, and silly nicknames, you should know that we always credit the letter's author, so enjoy your name in print!

You will have to ask Gideon Overhead that question. But knowing his loyalty to the Amiga I very much doubt if he will say

anything against the machine he has used and liked for so long. I can only say that everyone at AUI wishes Gideon the very best of luck in his new job.

I don't think the PC deserves to be slagged off as you put it, some of the PC owners do, I will admit that. The PC is several years before the Amiga in basic design terms, and it has had so much development time spent on the software that backwards compatibility has been a necessity. This has prolonged the life of the O/S beyond what would normally be expected.

The new O/S, Windows 95 is a transition product that in a couple of years will be replaced by a fully 32-bit O/S. That will remove the crippling MS-DOS limit, and the 640k base memory limitations. This will really open up the PC to the full power of the CPU, which like it or not, are very powerful processors indeed.

When all this happens, the Amiga is going to have a fight on its hands, and it is vital that Amiga Technologies position the Amiga in the markets in which it excels, in order to ensure the survival of the platform. The very interesting development is the decision to port the Amiga O/S onto the PowerPC chip. If this port is successful we may well see some awe inspiring hybrid applications coming onto the market.



When writing to Amiga Answers please include as much information as possible about your system and about the software/hardware you are running. This will help determine what your problem might be and possibly its solution! Send your questions to:

Amiga Answers, Amiga User International
Unit 2, Utopia Village, 7 Chalcot Road
London NW1 8LX

or E-MAIL:

amigauser@cix.compulink.co.uk

The Amiga's Serial Device

This month Paul Overaa illustrates a rather unusual use of ARexx especially for Amiga users whose interests lie in music and Midi sequencing.

ARexx and Midi may seem like a rather unlikely combination, after all ARexx is an interpreted language and so ARexx script execution is always going to be slow relative to other languages. It's certainly true that because of this inherent slowness ARexx is never going to be an ideal language for writing complex Midi programs, but this does not mean that it is inappropriate for all Midi applications. It is, for example, perfectly possible to create small Midi diagnostic utilities using ARexx, and there are plenty of benefits - particularly since ARexx is now given away freely to all Amiga users as part of the system software.

To transmit or receive Midi information, the first step is to configure the Amiga's serial device for Midi. Unlike languages like Basic, ARexx does not have any built-in facilities for controlling serial port characteristics, so the serial 'Preferences' editor must be used to select 8 bits plus 1 stop bit transmission at a Baud rate of 31250, with no handshaking, and no parity. Having selected and saved these settings, AmigaDOS provides two high-level serial device handlers that can then be easily used from ARexx.

AUX: provides unbuffered serial I/O and SER: provides a stream-oriented, buffered, interface. I use AUX: for transmitting Midi data and SER: for collecting it (since incoming Midi information could otherwise be lost). If you want to use the AUX: handler, you must ensure that it is up and running - on new Amigas it's usually best to drag the AUX icon from the Storage/DOSDrivers drawer to the WBStartup drawer so that the AUX: device is always available from the time you boot up your machine.

Once the underlying serial device has been properly configured the remaining issues are surprisingly straightforward because, in both cases, these serial device handlers are treated just like conventional disk files. For example, to open the AUX: device this sort of script arrangement could be used:

```
if Open (1,'AUX:','WRITE') then
do
/* here we would do something! */
end
```

The function Writch() can be used to transmit the bytes of a Midi message. Writeln() is not appropriate because it produces a terminal line-feed character. So, to transmit a message held in a string called midi_message\$, you would therefore use this type of statement:

```
call Writch(1,midi_message$)
```

If, for example, the variable midi_message\$ was to be created as a two byte message containing the hex values CF hex and 01 hex, then the string could be defined using the ARexx concatenation operator (||) like this:

```
midi_message$='CF'xll'01'x
```

The above message actually represents a program change 2 message on Midi channel 16 and if we now put all these ideas together, we'll end up with a short script that does indeed transmit just such a program change message:

```
/* midi_test1.rexx */
if (Open (1,'AUX:','WRITE') then
do
midi_message$='CF'xll'01'x
call Writch(1,midi_message$)
call Close(1)
end
```

That gives you a runnable example of Midi byte transmission and, as far as ARexx's Midi connections go, there's not that much more to tell. The corresponding ARexx function used for reading incoming Midi data is called Readch() and this requires both a file handle and the number of bytes to be read. In this case, since you'd not normally know how much Midi information was going to appear at the serial port, you'd need to loop-read incoming Midi data one byte at a time like this:

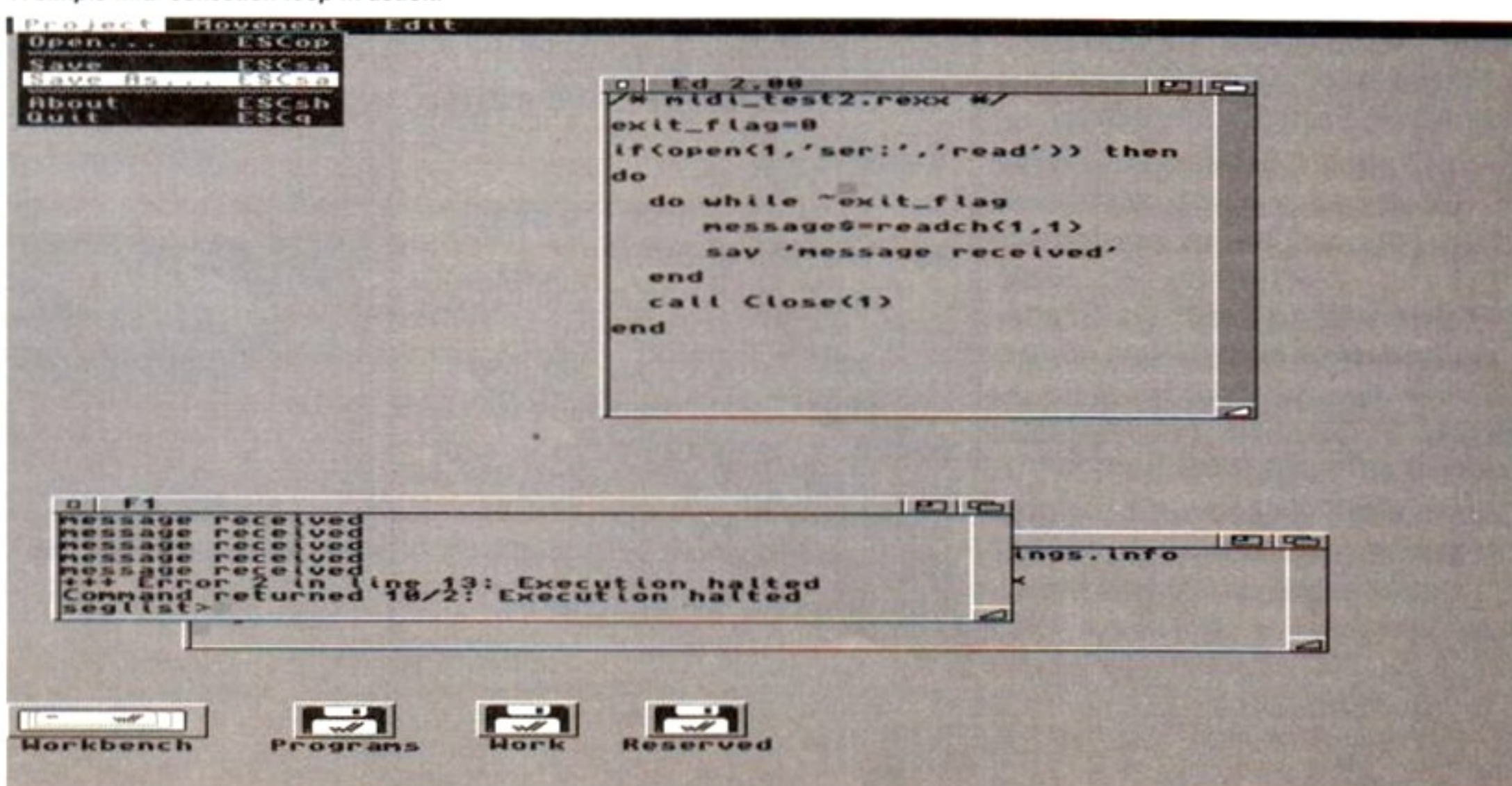
```
/* midi_test2.rexx */
exit_flag=0
if (Open(1,'SER:','READ') then
do
do while ~exit_flag
byte=Readch(1,1)
say 'byte received'
end
call Close(1)
end
```

Notice how this second example forces its entry into the collection loop by setting an exit flag variable to zero, and then uses the ARexx logical NOT (~) operator to 'invert' the sense of the do-while conditional test.

Midi message collection, since it normally involves both collection of bytes and the identification and analysis of status byte values (midi bytes which have bit 7 set), is the more difficult task as far as any ARexx script is concerned (this is purely a speed thing - it's not that the writing of the code itself is any more difficult). But there is absolutely nothing to loose by experimenting with some of these types of Midi oriented ARexx scripts (other than a little of your time).

Those of you who take an interest in things like Midi system message creation, and so on, will also find that practice in transmitting and receiving simple Midi messages is also a great way to come to terms with hex<->decimal number conversion **AUI**

A simple midi collection loop in action.



PD STAKEOUT

Scoring

The marks awarded to each PD disk are based purely upon its own merits and, of course, our personal views. Value for money and reliability are also taken into account as well as features and quality of the software.

Compatibility

The PD disks reviewed in this issue were tested on an A1200 with a basic 2 megs of chip RAM. Check with your PD supplier that the disks you are ordering are compatible with your Amiga.

AH21

Amigaholics

Sad to see that the excellent disk magazine of the Amigaholics Club could be coming to the end of its current run. The editor and club organizer, Kevin Bryan, asks his readership to be a bit more active with regards to sending in material for the publication.

I understand that this has been somewhat reduced since several key club members defected to the

PC. Still, what there is on this disk, is entertaining as usual, and there are a number of small goodies to add value to the £1.50 cost.

Although the general magazine could be nearing its end, Kevin Bryan tells me that the Club will continue by issuing disks that are only 'HD installable'. AH21 can be 'read' by non-members, but to get the full benefit you need a special 'master disk' that sets up your system - a little like our SuperDisks.

Club membership is £5 per year, payable in April. Full details, and back issues, for Kevin Bryan at the address in the contacts box.

86%



PD or ShareWare?

All freely distributable software comes under the rather deceptive umbrella of "public domain". Quite a lot of this software is, in fact, shareware. Shareware means that if you like the software, or use it fairly regularly, the author will request a reasonable donation from £5 to £20. There is usually a note on the disk informing you if the software is shareware or regular PD.

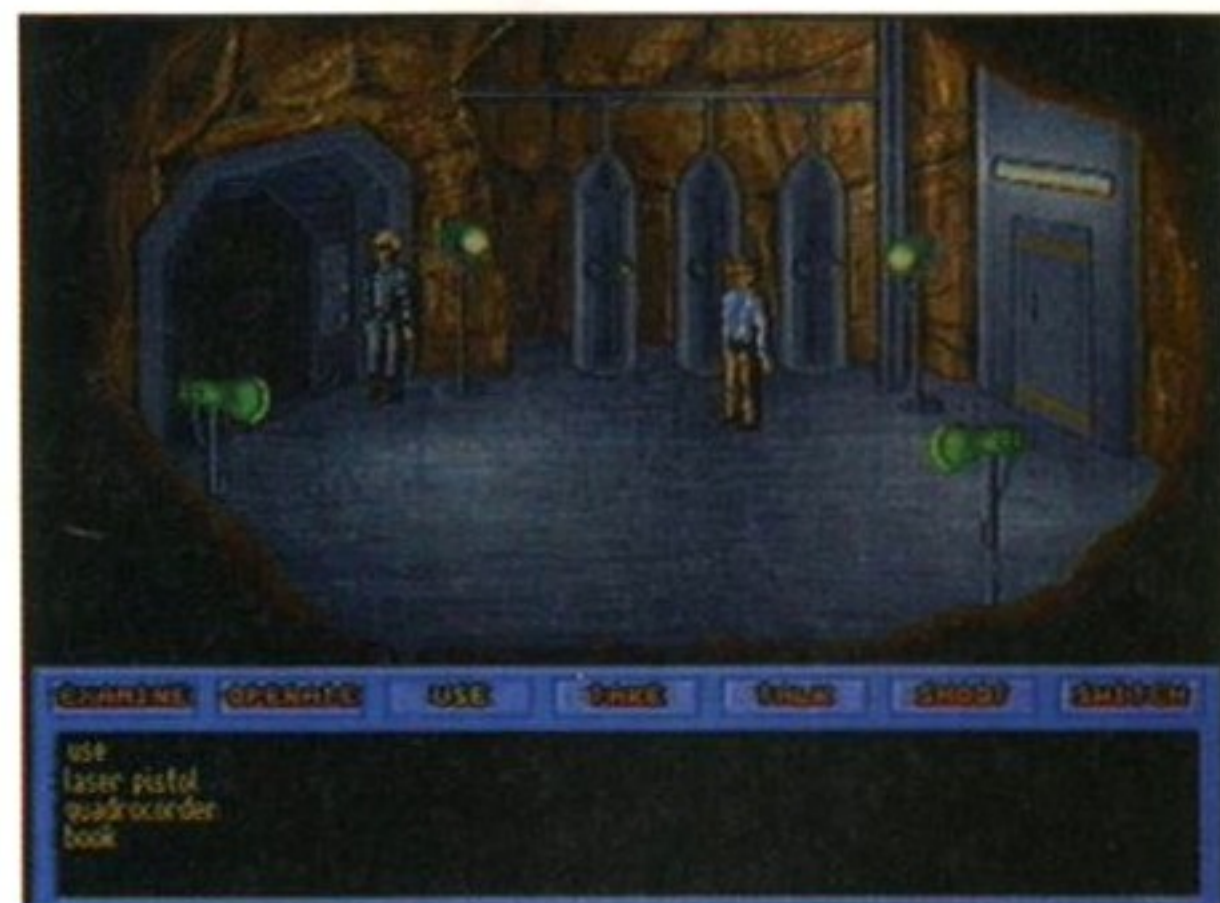
Whether or not you send a donation to the author depends totally upon your level of conscience and morals. Remember, if you send a donation to the author, you may receive an updated version of the software. Even if you don't receive an update, you will have given the author the incentive to continue contributing into the public domain.

Epsilon 9

F1 Software

Here's a sequel. Edmund Clay put together a graphical adventure game some time ago called Starbase 13. You played the hero, Commander Yeno Hou (a blond oriental? - Ssh! You Know Who), who had to secure the space station complex. Now, hardly having recovered from this escapade, you are sent off to Epsilon 9 to determine the fate of the mining colony there. All you know is that the Stingons have an interest in the planet.

This time your adventure is going to be that much better. Why? Because this whole thing has been put together using the wonderful GRAC - Graphical Adventure Creator. This gives your home made stories a similar sort of power that first astounded us with the release of the commercial game Monkey Island.



A quick word of warning. Epsilon 9 requires you to activate a command like 'take' or 'examine' with the left mouse button, and then indicate what you want to take or examine with the right mouse button. This could be the computer, a notebook, and so on.

90%

Lha Files #1

Roberta Smith DTP

Here's an unusual disk. There are 20 Lha archives on this floppy, each one holding a particularly popular tool that often been requested by the Amiga community without access to the Aminet. The goodies include a variety of Workbench hacks and tools, but



the one puzzle is "Why is there an archive of the Italian catalogue for the registered version MCP on here?"

80%

CONTINUED

How to tie dye

Roberta Smith DTP

I remember doing this at primary school many moons ago. And it was great fun, although the fate of the tee shirt that volunteered to be immersed in the noxious liquids is still a mystery. Perhaps it took the opportunity afforded by its altered appearance

to escape to a new life in South America?

This two disk set takes you through all the details on how to create pretty patterns by dyeing cloth that has been viciously tied up with string. The whole thing has been put together quite expertly I must add, by using CanDo - an underrated multimedia authoring package in my opinion.

A simple point-and-click interface takes you through everything necessary to do this type of artwork. What equipment you need, even where to buy it, is all covered. Peter Aston has done a very good job, and we wish him well in his Arts degree.



92%

Parasite



F1 Software

A single character Dungeon Master clone in Amos Pro. A bit slow, but this does have the advantage of being playable by two Amiga users, one at each end of the keyboard.

Not so much hack as blast

your way through the somewhat metallic looking monsters. The smallness of the Amiga keyboard should make for an intimate game... so it's reserved for best and girlfriends only.

87%

Smut

GVB PD

After being plied with drinks by Gerry Broad, your reviewer was persuaded to mention the disks he is currently peddling as 'art'. Okay, they're not as bad as some of the things we have shown 'uncovered' in past editions of AUI, but we're trying to forget

that. Anyway, for a full listing of what's available, check out the GVB ad.

So what do you get for your money? Each disk has four or five 256-colour images that are replayed in slideshow fashion to an appropriate module - the James Bond theme. The quality of the pics are good, and are hardly more than what you would expect to see on page three of the Sun.

PG%

FUNHOUSE IV

Saddletramps

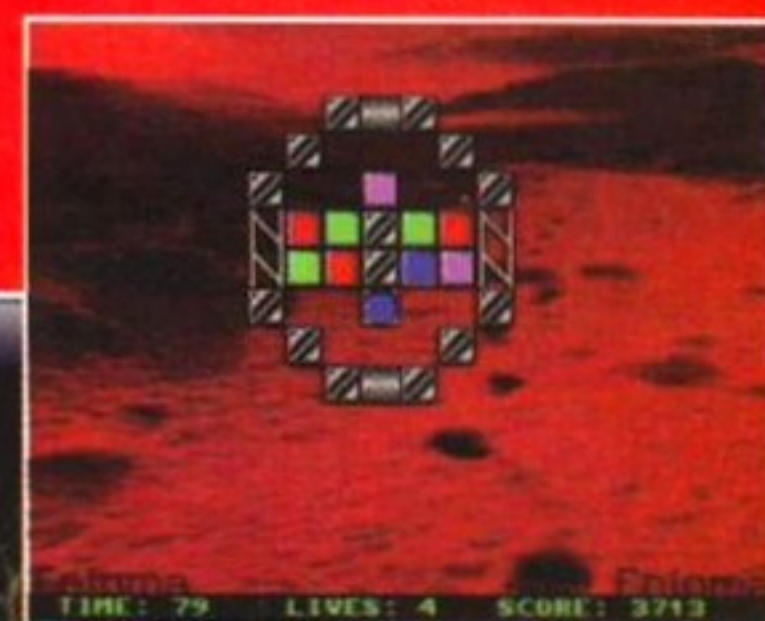
We looked at Funhouse III quite recently, and gave it a very good review. Now Funhouse IV is set to follow in its predecessors footsteps.

This disk has three items on it, two games and a background image generating program. The first game, Fever, is a demo of a Doom clone, and very effective it is too. Only a handful of levels though, so keep an eye out for the full version.

The second is a "shift the tiles" puzzler that starts off easy, but had me stumped fairly soon. The idea is to push the similarly coloured

tiles together so that they explode. However, later in the game you encounter triple sets of blocks. How do you deal with these? Obviously more time at this teaser will produce an answer.

The design program will merrily generate exotic backgrounds using complex formulae. All that the push of a button. These would appear to be ideal for creating unusual Workbench backdrops, or even landscapes for home-brew games.



90%

Madhouse v1.1

17 Bit

I just love PD disks that have not been set-up correctly. Sometimes this is due to the authors, while at others it is the fault of the PD library. You know the sort of thing I mean... you click on the important ReadMe file and your Amiga throws up the requester "Cannot find your tool 'c:\View80'" or, on this occasion "Cannot find your tool 'c:\Installer'". Come on guys, get these things sorted out before issuing the disks, not everyone has a copy of Installer floating about on their system.

Ahem. Right, Madhouse is a set of blankers for your Amiga. Yeah, yeah, I know, you've seen them all

before... squiggly lines, bouncing logos, and so on. But you've not seen anything like this. How about a football game, or a city skyline, flying toasters, whatever. Different I am sure you'll agree.

A couple of slight drawbacks. You have to register if you want to save your preferences, and the doc files are archived using Lha - not supplied.



90%

V12-PD

Dept AUI
PO Box 14, Louth
Lincolnshire LN11 8LF
United Kingdom
01507 450114

10 PD DISKS FOR A FIVER FROM OVER 12,500+, BLANK DISKS WITH LABELS AT £2.50 FOR 10, TRADE AND BULK DEALS ON BLANKS MUCH, MUCH CHEAPER THAN ANYWHERE ELSE IN THIS MAGAZINE!

OUR CATDISKS CAN BE DOWNLOADED RIGHT NOW FROM MIDNIGHT EXPRESS BBS, THE UK'S COOLEST AND BEST BBS ON 01384 865 626 OR THEIR NEW LINE, 01384 826 282 RIGHT NOW, AND RIGSBY'S BBS ON 01530 260160, OR HAIR OF THE DOG BBS ON 01344 4425553!

Special offers, extremely limited, ring now...

Now available, hard drives (3.5 inch ide) are in from our mates across the pond, only large sizes currently available, 540 Meg to 1.3 Gig, but very cheap and 100 Megs of free PD installed on it, as well as full Partitioning/Magic WB etc, we are selling these very cheaply and they are brand new models with full guarantees. 2.5 - 3.5 cables available, fitting is also possible. Ring for latest prices and more details! These are cheaper than any ad in this magazine, we think!

Available now! V12-PD CD Volume 1, compatible with all Amiga CD drives running workbench 1.3 - 3.1, contains about 1000 of 12's latest PD disks, all running through a custom, multitasking GUI menu system coded by freak of NFA (superb looking). We have limited copies available as of press date and they can be ordered for the first time offer price of 15.99! Please ring us to get a copy quickly if you're interested!

Other services include flatbed scanning, digitizing, sound sampling, membership, PD swaps, foreign PD available in large numbers, brand new and direct from the authors! Our membership for one years Catdisk update (24 disks!) is only £6.00, get the latest PD available within minutes of it being released, and our fab disks for a year without bothering to ask for it every month. Platinum membership is 15.00 and entitles you to 10% off PD, year's Catdisks as they're released, 30% off scanning, 30% off blanks as PD, 25% off scanning, 30% off sampling, etc, etc, etc! Don't miss it, or you'll cry for days!!!

V12-PD welcomes all loyal Amiga users out there!

Hellow. How are you? Me? Oh, I'm fine, thanks. I'm here to let you in on a big secret, it's about PD, not just any PD (he says, turning up his coat collars and uneasily shuffling his hands in his pockets...) It's PD from da boyz at V12. I'm tellin' ya boss, it ain't like no PD ya bought before, it's cheapa, they got more muscle behind 'em than da other families put togetha, and all those services, they must have some serious rackets going, Boss. I ain't yella, but I sure am scared....

Erm, yes, enough of the gangster impressions, let's get down to brass tacks, we sell PD, you want to buy PD, so that's that then.

Bye. Hey! Hang on, I haven't even got halfway through the advert yet, better carry on a bit with some more waffle unless you want a bit of this magazine clear to doodle on....

**Our PD is cheap, it's very cheap. In fact here are our piddly prices:
1-5 disks = 65p each • 6-9 disks = 60p each • 10+ disks = 50p each
P+P is only 50p on any size order!
Disks are 25p each including P+P if you supply the blanks!**

A bit impressive, eh? Just compare our prices to any other PD library in this mag, and see if we ain't the cheapest library of any size. I bet we are. And compare our disks, have any of our competition got 12,500+ disks to offer, we have over twice the amount of disks that most companies have, and even 10,000 more than some that have been going for years longer than us! Is it time you changed over to the high speed, turbo charged company with attitude? Don't miss out any longer, just get one of our Catdisks and see what's happening at the sharp end of the PD world.

This advert is not like the other ones that've no doubt been observed by all you PD fans out there. You see, we don't put endless lists of disks on ours, simply because it is pointless, you'd only know whether a program was good if you actually owned it already with just the title or a silly 5 word description to go on. We don't bother with that, we leave the shouting to our Catdisks, and oh, my Lordy, what a Catdisk it is! You may also notice our adverts actually change each month, unlike some....

Where was I, oh yes, Catdisks. Our two disk catalogue is a masterpiece, it's undoubtedly the best and most entertaining Catdisk that 3 first class stamps could buy you. It's a full two disks, with details of our entire 12,500+ disk range on it, not just a few of them, each and every one, including full contents listing for all the Fred Fish disks, Scope, LSD Legal Tools, Assassin's, everything!

There's no more to shell out for with us! Not only the witty, humorous, handsome listings, but the presentation. An optional RAM installation menu for speeds of over 300K a second on your screen from crunched ASCII text files make this the fastest Catdisk on earth! Compatibility? No problem, this catalogue not only works on every Amiga from WB 1.2 to 3.1, it even detects what Amiga it is in, and enhances it to the system's specs on the fly! Music that'll blow you outta ya socks, samples, full point and click mouse menu systems, animation, intro, heck, even an animated advert for our company on it, no effort is spared for your delight!

New offers from our buddies at Midnight Express include 9600 BPS modems for 49.99(!), 14,400 BBPS modems for 109.99 and 33,600 BPS modems (ring for availability and price). They can be contacted by the BBS number above with a modem, by voice on 01384 77172, or by mail (no, that old way?) at 21 Tiled House Lane, Brierley Hill, West Midlands DY5 4LG.

New packs we've put together for you this month are the following:

Amiga: From Beginner to Winner (10) = 4.50 incl. P+P! Ten disks of tutorials and utilities on everything, from workbench, to printing, artwork, animating, music, internet and comms, raytracing. You name it, it's here.

PD Gold Vols 1 + 2 (8) = 4.00 incl. P+P! The best games available on the Amiga PD scene, includes The Lemmings Clone, Chaneques, The Worms Clone, Mash, a super platformer called Nicky 2, a brilliant shoot 'em up called Missiles Over Xerion, the best PD shoot 'em up ever, Deluxe Galaga V2.5, and a superb role player, Dungeons Of Avalon 2. Received over 90% in reviews in 4 mags, game of the month in 3 of them!

Mr Maestro music Vol 1 (10) = 4.50 inc. P+P! Contains the best music program in PD, Quadro Composer V2.1 and 6 disks of modules, as well as 3 disks packed with a huge range of samples to plink plonk with!

Amiga's Pink Pill Pack (10) = 4.50 inc. P+P! 10 disks of system checkers and enhancers, virus killers, latest version of disc salv and virus checker, virus workshop, memory checkers and clearance, de fragmentaters for HD's, HD install set up, everything you need to keep the Amiga healthy! Specify which Amiga.

Pixel Perfection Vol 1 (10) = 4.50 inc. P+P! A superb graphics pack, with art utilities galore, contains, converters, manipulators, rippers, full paint packages, and over 250 clipart images of a very varied nature!

Video Maniacs Pack 1 (12) = 5.50 incl P+P. A superb pack for video titling, disk presentation or intros. Includes 3 disks of utils for animating, titling, converting, etc, and 9 disks of video type fonts, large, bold, colourful. Approx 500 in all!

Compugraphic Font Pack 1 (15) = 6.60 inc. P+P. Approx 170 compugraphic rescalable fonts on 15 disks. Suitable for Wordworth etc, superb quality and a good price, Missus!

Glamour Girls 1 (12) = 5.50 inc. P+P (AGA) 12 disks of AGA girls, including some famous names. Over 18's only! Superb quality pics!

To get your packs, simply write the names down on a piece of paper, and send a cheque for any you require. The Catdisk is free with a pack to save you even more! Cheques and Postal Orders accepted, as well as phone banking. For an order over the phone, please have your cheque book ready for the account number. Visa not required, but a cheque book is!

And a bit of late news, our Catdisk is fully hard drive installable, with a hard drive installer and removal program, so you can install it and get rid of it as easily as clicking an icon! This is probably the first ever HD installed Catdisk on the planet!

Installable too, with both an installer script and a removal script for your Catdisks, send 3 first class stamps to the address above. Go on, you know you want to and start paying a respectable price for PD!

Greetings go out to Dean Kelly of Midnight Express BBS (let's think round and shiny!), Rob Daviau, Stefan Mansier of Holland, Coca Cola, Freak of NFA, Michael Carter, Robert Wilkins (it's your lucky day!), and everyone we've forgotten (the ol' memory's not what it was...).

Flatbed Scanning Services

Flatbed scanning is now available to a professional standard, with BPI up to 2400 x 2400 DPI, every file format from ILBM to JPEG, and every resolution from Lores-NTSC to Superhires - full overscan Pal and custom resolutions beyond that. We offer this service out to any PD company, or any Amiga based company at discount trade prices, and also to any Amiga owning individual at the very low prices, ring us for details. We are at least 3 times cheaper than dedicated scanning bureaus. Any Amiga company who wishes to offer our services can arrange an agreement with us for some serious discounts, so make those scanning dreams come true! Remember also, our digitizing service, when allied with scanning, can offer computer representation of any object, any picture up to about 4 square metres (!) with no loss of quality. Please ring for further details.

WE STOCK ALL THE COLLECTIONS INCLUDING ASSASSIN'S 1-250, FRED FISH 1-1000, SCOPE 1,220, AMIGAN, ARUG, NEW ZEALAND, IMAGINE OBJECT COLLECTION, CLIPART COLLECTION, BARBIE, AMOS, LEGAL TOOLS 1-149 AND THOUSANDS MORE. WE NOW ALSO SELL CD'S CHEAPER THAN EVERYONE ELSE, EVERY AMIGA CD AVAILABLE IS, ERM, AVAILABLE FROM US!

12,500+ Titles, that's more than a library with less than that!

CONTINUED

NFA Snail Racing

OnLine PD

Now with a title like NFA Snail Racing you immediately envisage scenes of US style sports - NFL Football, NBA Basketball, and so on. Not so with snail racing. This is a plain and simple game written in Amos by first-timer Eloise Summerfield, a cuddly blonde (so she says) studying Pharmacy at University.



Anyway, this is what you have to do. Feed your snail on what you believe to be the race winning diet and then watch it go, go, go. Winners get a cheering crowd, losers probably get trodden on. Up to four players can take part, or you can play against computer generated opponents on lonely nights.

There is a betting variant to the game, in which case the computer selects the snail's diets, and you put your money down on the one you think will win.

For a first effort, I was quite impressed. Although obtainable via OnLine PD, please help Eloise Summerfield through Uni. by donating a fiver. This is what shareware is all about.

84%

Promoware

Roberta Smith DTP

A popular method of advertising in Germany is to release some sort of platform game tied in to a particular product. We have already seen 'Nesquick' in these very pages, now it is the



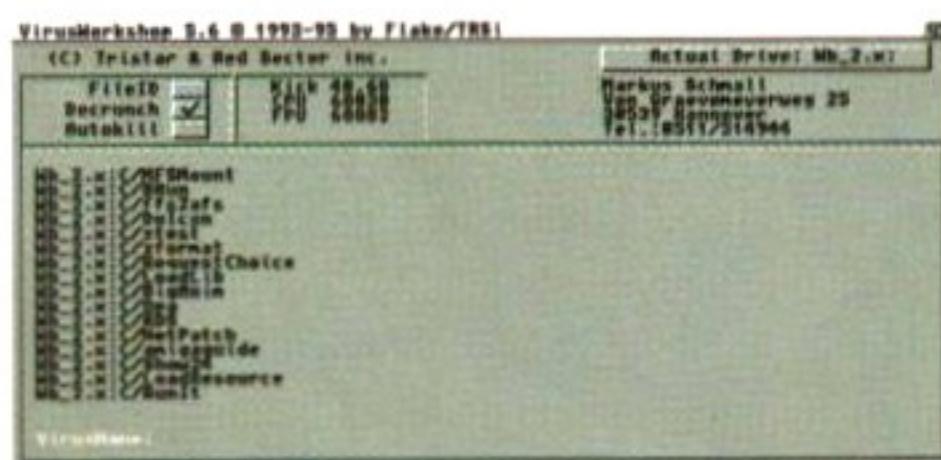
turn of Pepsi. This is a fun game, and will keep everyone amused for a little while.

The game takes place around the world, and there are different tasks to be performed in the countries shown. For instance, in Ireland you have to stand in the river with a saucepan and try to catch the salmon swimming upstream. In Japan you have to catch the crockery that zooms out of the porcelain factory on conveyors belts at high speed. While in Egypt the task is to cross the Nile to the Pepsi machine via crocodiles, logs, and rafts, without falling in. All very 'Jeux Sans Frontiers' (It's a Knockout).

We were also sent a game called 'McDonald's Land', but our A1200 took an immediate dislike to it. I know it prefers Burger King you see.

83%

VirusWorkshop v5.8



17 Bit & OnLine PD

One can never have enough in the way of Virus infection prevention software. I had trouble with the latest version of Virus Checker (v8.6) crashing my machine, and it was only while chatting with fellow Amiga buffs in the local hostelry that I discovered that it was the version of a particular library that VC had installed over my original that was the

root of the problem. It seems other Amiga users have encountered this same problem and have left VC off, thus leaving their machines unguarded.

A viable alternative to that old warhorse VC is Virus Workshop from rival author Markus Schmall, especially as VW handles crunched, packed, and archived files without the need for registration. However, as it does provide good protection - the sort you would expect to pay £100 for

on the PC - please do send off the \$10 shareware fee requested by Markus.

And news just in as I write this; loyal AUI reader David Wheatley has informed us that he thinks he has found a Trojan virus within the copy of HDToolbox supplied with his new A1200. His version is 105k in size, and ours is only 97k. David Wheatley was using the Extruda virus checker off of last month's SuperDisks.

97%

Word Puzzle Pro

F1 Software

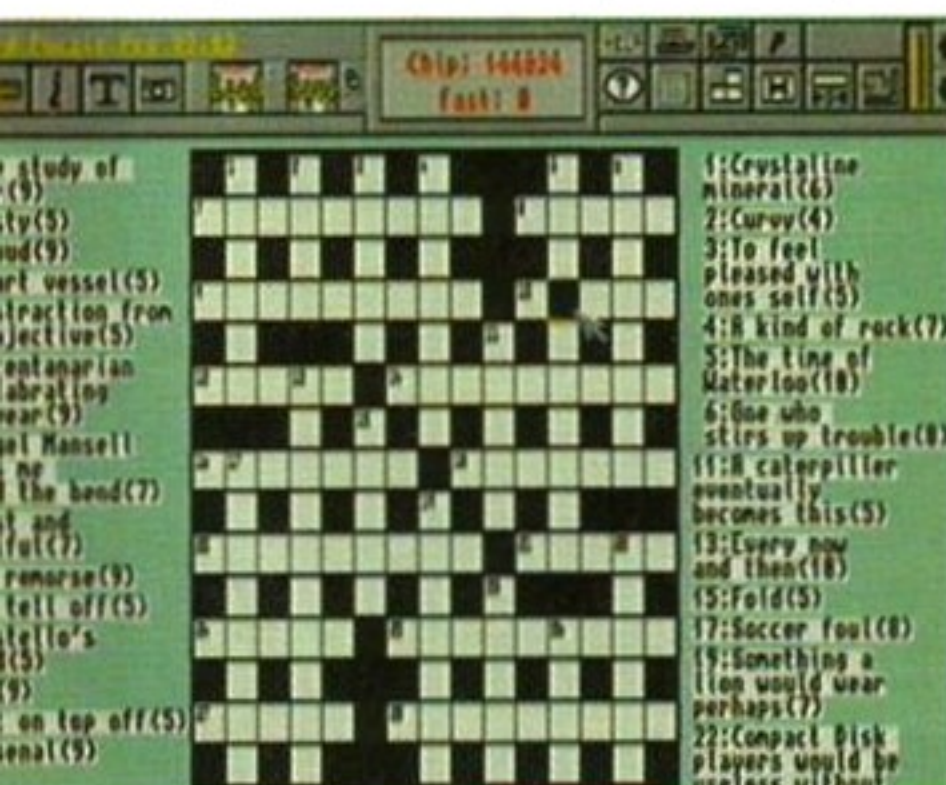
The bane of the crossword compilers life is fitting the chosen words into a grid in the first place. This shareware offering goes some way to helping out. Although it doesn't pick the words, make up the clues, or construct the puzzle for you,

it will certainly save many hours of tedious scribbling on the backs of envelopes trying to squeeze the words into an ill-defined grid.

This is especially true if you are attempting a themed puzzle, with answers related to a particular subject - computers for instance. There's only so many ways central microprocessor (7,14) can be used! To go along with the crossword program, there is also one to help you design wordsearch puzzles.

The whole affair has been carefully thought out and implemented, with on-line help, printer support, user selectable grid patterns, design tools, and a whole host of extra features for making the fiendish puzzle creator's life that bit easier.

93%



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If you have created a masterpiece and you would like it reviewed here or if you own a Public Domain company and want to contribute new and interesting PD, please don't hesitate to send it in. The address is:
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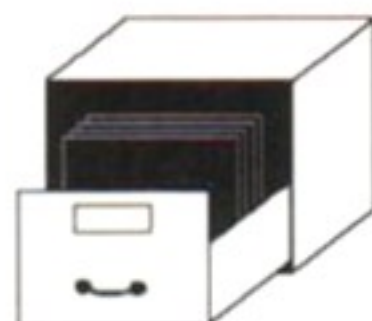
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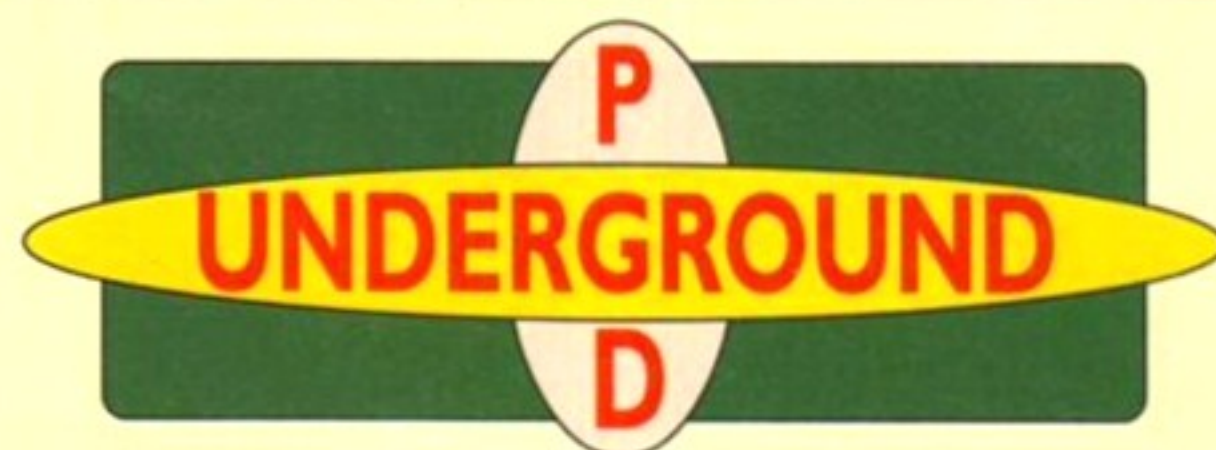
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Write to Reply

**Keep those letters coming as everyone loves
to read what you Amiga Users have to write
Plenty it seems and not all very favourable...**

Dear AUI,

I am writing to say how much I like your magazine and I need to ask you a question, so here I go. Could you please send me some free PD because I have only just got an A1200 and only have a few games (well about four) and my mum will not let me send off for any. If you want me to send p & p for the PD please ask and I will. If you could send me something I would be very grateful.

Thank you for reading this,

Danny Osbourne Age 13,
Brighton

Dear Danny Osbourne Age 13,

You're welcome. That's means for reading your letter. What you are not welcome to is free PD. We are a) not a charity and b) we have advertisers, PD companies, in this magazine who want to make an honest living and why should we be the asp in their bosom and betray them? They are the people to whom you should apply if you want free PD, but while you are thinking of writing to them to ask (beg) for the PD, you would be better off persuading your mother to follow a different course of action. That is she could, if she is suspicious of PD companies, pay for the products through a credit card and protect her cash that way.

What is most of concern is that you think that someone should send you free PD or anything else. This is a world where you get what you pay for and not always that. You should not think that because you are Age 13 you are excepted from the rules that govern the people of this world. It is up to you to earn, deserve what you get, not beg for it.

Why not try another strategy altogether? On your own, or with friends, get a parent or teacher to write on your behalf to PD companies or commercial games companies and ask them to supply you with games free. Then, for every game you receive, the responsible adult will ensure that you, or you and your friends, will give say, £1 or £2 to a charity that helps children in other countries

who can't get enough to eat let alone play computer games.

If you do that, Danny Osbourne Age 13, AUI will help you by contributing some games, if you arrange to contribute to others who need your help.

Age 13! Is that supposed to be some magic passport to something for nothing. If you weren't so young, I'd tell you to grow up.

Dear AUI,

I have owned an A600HD since about 1993 and I read all four of the major magazines: CU, AUI, AF and Amiga Computing. I am extremely glad that we have our own magazines and you do an excellent job of putting AUI together. Well done!

Reading through the various readers' letters, be they technical inquiries or Write to Reply, I have noticed a particular bias against the A600 computer by your staff. My problem with that is that - yes, the A500 and the A1200 are brilliant machines - and maybe the A600 was an afterthought and filled in the gap between the two of them, but why not give it a better chance to survive? When you offer someone information on these pages why simply tell people to throw their computer away and get an A1200? This has happened too many times to ignore now, and personally I have been very happy with my A600 for the last three years, and I am sure that many other people are also.

Will having an Apollo A620 Accelerator on the market help to change your minds? Perhaps ESCOM will wish to manufacture a few more A600s? You say that you are all avid Amiga users - is this true, or have you all started to turn slowly but surely towards the IBM or MAC? And no, I will not call an IBM a "PC" as it is far too general a word.

Also, I have noticed that the hardware/software advertisements do little in explaining that their product can be used

not only on an A1200 but also the A600. There are only a handful of companies that will mention the A600 in their advertisements. I was in advertising for about nine years and there is nothing difficult about adding the words "also fits onto an A600" into their typesetting!

In the May '95 issue (page 63) of AUI you noted that while the A600 had a short shelf life, there were many of them sold - how many exactly?

Yours sincerely,

Jeff Huddleston,
Auckland, New Zealand
("Home of the Americas Cup")

Dear Jeff,

It's not that anyone here really has anything against the A600, it's just that it wasn't a sensible machine for Commodore to have produce to follow up the A500+. The worldwide success of the Amiga 500 was huge but Commodore, instead of jumping up to the next stage which should have been something like the A1200 went, to the A600. Although small, it really wasn't much of an advance on what had gone before.

The operating system of the A600 wasn't a great leap forward. The power that it had wasn't great enough - it needed 2Mb or even more. And, unfortunately for the market in PCs which was beginning to take off, it looked like a toy and it didn't automatically come with a hard drive.

The cost of the add-on hard drive was exorbitant and the marketing of the computer, at least in Europe, seemed to be in competition with the Nintendos and Segas rather than with real computers. We are, I hope, not biased against the A600 which is, like all Amigas, a very usable machine and a real computer. It can, like all Amigas, achieve wonderful results in almost anything - within its range. The trouble is that it can't do what computers, like the A1200 can. That's not its fault, its Commodore's. But the idea of Escom producing more of them or anything special to go with them is, I'm sorry to have to tell you, some kind of dream that is never going to reach reality.

That doesn't mean that the A600 is dead. Commodore is but as long as you and the thousands of others who use the A600 go on using it and enjoy using it, then the Amiga 600, a bright and clever little machine, will survive.

As for how many were sold, unfortunately no-one knows. Commodore's figures were never reliable - no more than are any other manufacturers. (They are talking of having sold a couple of million Sega Saturns in Japan alone!) But an educated guess was that sales

CONTINUED ON PAGE 96

Write to reply

didn't reach 750,000 and were probably were closer to half a million. Compare that to the seven million or so A500s that were bought around the globe, making it for some time the largest selling computer ever - possibly still!

Dear *AUI*,

I have just purchased the latest edition of your magazine and when I arrived home I removed the two disks off the front. When I looked at the labels I noticed that the SuperDisk labels were stuck on top of other labels; that is bad enough. On further inspection I then saw that the slides on the backs were missing, which means that if I wanted to format the disks it would not be possible.

All the other copies of your magazine had the same coloured labels underneath yours; if the slides were missing I cannot say. I have just looked at the disks for January and they have the slides missing as well. Is this kind of problem going to be normal from now on, because if it is then what you have printed on the front of your magazine is a load of rubbish.

Yours, one angry and disgusted reader,

Mr. S. Longden
Redford

Dear Mr. Longden,

It was the write protect slides on the disks of the magazine you bought that were missing, but the disks themselves were not 'defective'. However, we are extremely sorry that you should feel the way you do.

We have had no other complaints of this kind, but would like to point out to our readers that if they wish to format a disk with the write protect slide missing, then a piece of sticky tape covering both sides of the hole will allow you to.

As for the matter of the labels, certainly a proportion of some months' disks have been recycled disks. This is a policy of many magazines. At *AUI*, we believe that we should encourage the saving and re-using of the earth's resources wherever possible. When, and this has happened going back many, many issues of *AUI*, some recycled disks are used, it is necessary to relabel them. Relabelling, we are given absolute assurance by the duplicators who do this, has no effect whatsoever on the performance of the disk.

Our disk duplicators copy 3 million disks

every month, and strictly follow the quality guidelines laid down in BS5750. This requires samples to be taken from the batches of disks processed before, during, and after production. They, unfortunately, cannot test every single disk, and

therefore a handful disks, recycled or otherwise, slip through as defective. Should you, or any other reader, receive defective disks, then please return them to the address given in the magazine for such disk problems and they will be replaced and your postage costs refunded.

We would, if we could, use recycled paper for *AUI* too. However, for various technical reasons that is not practical. What is practical is to try and use the resources of the Earth so that we do not waste them. Don't be Disgusted of Redford, the *AUI* SuperDisks are what they say they are - SuperDisks which, as many readers have commented, are now being copied by other magazines. Take no substitutes for the best, even the recycled best.

Dear *AUI*,

Where do you get all this TechnoWorld stuff from? You seem to know more about what's going on in the far reaches of science than any other magazine around. I've been reading *AUI*, since the good old bad old days when it was just a section of Commodore Computing International and I longed for the cash to buy an A1000 but these days, I've got to admit it, I'm a PC man - at work I had no option.

But I still read *AUI* to keep in touch with what is happening in the Amiga World - that was a great mag too. And I also buy it for all the Techno stuff, some it is like SF or the X Files. I've shown it to some guys I work with and they wonder why there isn't a PC magazine like it. See you in the TechnoWorld someday.

Sincerely,

Angus Winsley
Devon

Dear Angus,

Don't you read the intros to the "TechnoWorld stuff"? The *AUI* team "boldly go" generally led by Technoonie Martine Witton - who occasionally even changes sex to get in there among the other technofreaks unnoticed to return with all the secrets of that strange and sometimes rather unpleasant dimension.

They also, I understand, keep their ears to the ground and their noses to the wheel, which may account for the funny looks they have and are given when they wander into that home of the technojournalists "El Vinos", a bar that contains more peculiar looking inhabitants than

that one in "Star Wars", or was it "The Return of the Jedi"?

One person could clear up the confusion for me is that Witton person, but I'd better not ask otherwise I might be raked into to some of the very, very, peculiar so-called "techno" activities that the fearsome Witton delights in. Not for me, I'm not into that unnatural sort of thing. I'm off home to my hot water bottle.

Dear *AUI*,

First of all, I hope the question I am asking in the content of this letter should be directed to you in the first place? I'm a subscriber to *AUI* and am simply wondering if you'd be willing to include this letter, or more likely part thereof, or even just an *AUI* version of it, in a future edition of the magazine by way of a vote of confidence from me? Let me explain.

I recently purchased a new Canon BJC70 colour printer. It's a little beauty, with little being the creative word for it! Anyway, as you're undoubtedly aware, this type of printer is nearly always only shipped with printer drivers for Windows and DOS on the IBM PC. This, of course, may be standard procedure with any new printer these days, and it shows a willingness to help the end user get better results.

Unfortunately, this is no benefit to us lucky Amiga users! I'm a registered user though of the excellent Studio 2 printing enhancement package, and while I'd undoubtedly have been able to find a "suitable" printer driver, there is not a "dedicated" one for the BJC70, unlike for most others in the Canon range. When I returned the Warranty card to Canon (UK) Ltd., I included a letter explaining my concerns. Bearing in mind that this letter was only sent on a Monday morning, I was very pleasantly surprised to receive two separate [sic] envelopes with the Canon stamp on them in the early Thursday morning post.

One envelope contained the two year Extended Warranty I'd requested (a steal at £25!) while the other, from a separate [sic] Canon department (obviously the one responsible for producing/updating printer drivers), contained a disk full of Canon printer drivers. As I found out in a readme file, it was actually a cut-down version of "Canon Studio", although obviously a fairly recent one as it contained a BJC70 specific driver.

But while even this one works perfectly, not satisfied with what they'd already done for me, they'd also included a letter with a reference number and telephone number on it explaining that they were currently working on a new BJC70 printer driver for the Amiga and that I would receive it free of charge as soon as it was available (in about a months time)!

All this goes to show that they had read my letter thoroughly and not only taken note of the points I raised, but acted on them what must have been almost immediately, when you consider that I received their reply only three days after I

(Note from Katie (I Love Leeds United or Separated) Walters who checked and keyed in the letters in this Write to Reply - on an A500) "While I was in Auckland last year I couldn't find a single copy of *AUI*. Not even 10-month-old copies. Perhaps I wasn't looking in the right place. Or perhaps that chap had bought them all. We'll never know..."

K
xxx

Dear Miss Walters,

Jeff Huddleston is a living and writing proof that wherever you looked in Auckland wasn't in the right places. He and many others on the other side of the world buy *AUI* and we assume like it. Probably your attention in New Zealand and Australia - did you see any *AUI*s there? - was taken up by bronzed and muscled hunks who, we understand, threw themselves at your feet and possibly anywhere else they could persuade you to "brace yourself" - such as at the Hostels that you graced.

Perhaps if you had carried a noticeable copy of *AUI* with you, you would have met a better class of backpacker. However, if anyone reading this *AUI* down there in the Antipodes has any experiences with the flirtatious Miss K. Walters, we should like to hear of them - a free copy of the next three months *AUI* will be sent to the chap who writes to us with the best - and printable - story of her adventures.

had posted my letter!

Now that's what I call great service and eagerness to enhance customer satisfaction and relations! I have absolutely no reason to doubt that every customer is, or would be, treated any differently.

I would be very, very grateful if you saw fit to include this letter by way of thanks and appreciation for their efforts, and to make fellow readers of *AUI* aware of what should be expected of any major company, but the level of service they will definitely receive from Canon (UK) Ltd.

Thanks very much (in anticipation?), and should you decide to publish this, I look forward to reading that particular issue even more than usual!

Yours gratefully,

Davy S. Duncan,
Chester

Dear Davy,

It's always very pleasant to hear about

suppliers who not only provide a good service but also use their intelligence and initiative - as clearly has been in the case, as you describe in your letter.

In the service that you received, very unusually, an advertising slogan has been borne out - If anyone can, Canon can. And delightfully, they not only can but do too.

Dear *AUI*,

I am now nearly seventy and have owned Amigas for the past eight years, having bought a 1.2 500 when I retired. I am now using a 1200 with a Viper II with a total of 6Mb RAM and a 85Mb hard drive. I must be honest and say that I upgraded to this set up just a month before Commodore went to the wall. However what I have got I am stuck with and I am quite happy.

Anyway, to get to the point of my letter. I have never had a very good brain for computers and learning from manuals has always been difficult for me, but I must say the article you published on Hard Drives by Alan Lewis was the clearest exposition of a computing subject I have ever read. If all the textbooks I have had to read had been written with half this degree of detail and clarity I would now have at least double the knowledge I now possess.

Please let us have more of the same. This man not only knows his subject but, more importantly, he can explain it to others.

Yours sincerely,

Patrick Stewart,
East Sussex

Dear Patrick,

As you will see from the reply to Mick Lovering's letter I am as much an admirer of Alan Lewis as you are. He writes just the kind of way that you and others need and that's what *AUI* is for. One of the troubles with the "textbooks" you mention is that too often they are written by people who understand, but not for people who don't.

At one time "technical writing" was a recondite, even arcane affair, enterable by non-experts at their own risk. One of the first editorial honchos of *AUI* itself, a certain Bill Donald, came from that background, but probably wrote too clearly to stay in it.

That's why he joined *AUI*. Alan Lewis and other good writers who grace the pages of *AUI* are just the opposite to those technical writers of those days, and unfortunately sometimes of these days too, in being able to make it all ineffably simple and even elegant. But that's an art and it takes talent too. And we all hope Alan Lewis will be giving you - and us - "more of the same".

P.S. I do think that it is loyal of you to go on using your Amiga after all that excitement captaining the Starship Enterprise. Could you just be seen reading *AUI* in the next series? Thanks - but I do miss Spock. They used to say I looked like him except he smiled more.

Dear *AUI*,

I would like to make a comment on Alan Lewis' "Hard Driving Part 2" article in February's edition of *AUI*. After getting my hard drive sorted out, I read this article and found it very interesting and informative. I have used Alan's example directory structure and I must say that backing up my disk is a breeze.

There is one part in the article that I thought may confuse anyone that finds themselves without any installation of software - as I was. Alan says that it is not advisable to install Workbench by hand unless you understand AmigaDOS well. If you insert and open the Workbench disk, select "show all files", then select "select contents", you can drag the whole lot over to your Workbench partition by holding down the shift key - piece of cake. Of course you can do the whole thing by using the shell and I think this was what Alan was getting at in the text.

If anyone is thinking of fitting a hard drive and is a little worried about it - don't be, it really is very simple. It will make your life a great deal easier, providing you use a decent supplier!

Yours faithfully,

Mick Lovering,
Kent

Dear Mick,

You are right in what you say and following Alan Lewis' very clear articles makes everything a breeze. This has been commented on to us by many readers. The mysteries of the hard drive made easy, making complicated things easy is an art and Alan Lewis has it.

He writes simply and clearly but with a proper understanding and use of English other computer journalists please note. Of course that doesn't apply to *AUI* writers!

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Opinion

Many big companies, unfortunately, tend to speed ahead while the weather is kind, rather than investing for the future. Commodore appeared to do this.

One should not blame the company as a whole. Many of the staff were obviously extremely dedicated to the

machine they loved. Only those at the top had a hand on the tiller, but were busy partying while the ship headed for the rocks.

Too often the bosses are busy running a company for maximum short term return so that they can enjoy bulging pockets. Then leave the sinking ship at a later date in comfort while the crew drowns.

For too long Commodore relied on the success of its existing machines, but such success was largely based on the quality of the third-party software. When the money ran out, so did the developers. Jumping ship for the passing fleet powered by Intel engines.

Now there's a success story.

Instead of waiting for their competitors to catch up, Intel continually push back the boundaries of performance by a massive R&D spend on the development of faster and faster chips. As each generation of machines was superseded, business had to replace obsolete stock. Therefore a steady cash flow was generated for Intel and the PC manufacturers.

Upgrade

Unfortunately the average Amiga user will stubbornly cling to his existing machine, rather than

Try joining CompuServe, Pipex, or AOL, and asking for the Amiga version of whatever they provide.

upgrade. So once the market was saturated with Amigas, there was little chance of selling more into it.

The same has happened in the PC marketplace. However, once the business world was saturated with high performance PCs, the manufacturers had to look elsewhere to maintain cash flow. The answer was... you, the domestic

buyer. With millions sloshing around in the bank, there was no shortage of cash for advertising campaigns to convince Joe Public of the benefits of owning a PC.

CLONG, dong-ding, dong-ding, goes the 'Intel Inside' slogan, and together with the Micro\$oft stash, the juggernaut was set in motion. Has it been by chance that the Internet has come to the fore this past year? Of course not. Word processors and spreadsheets do not sell computers to the likes of you and me.

I've heard many stories of people who have bought a PC just to play a certain game. A few years ago it was Railroad Tycoon, then Civilization - the sort of game useless on a console. Last year it was 'Doom', which does transfer to the console well.

With the Playstation now, and the Ultra 64 shortly to be available, the future of the PC as an arcade games machine is now looking unlikely. What better than to promote the Net or Encarta, where you need a keyboard and a hard disk.

Net Surfer

Amiga Technologies is launching its "Amiga Net Surfer" pack. Will this make a difference? No. That is the short answer. The smart money is pouring into digital information providers, whose on-line services can only be

accessed if you use their Windows software. Try joining CompuServe, Pipex, or AOL, and asking for the Amiga version of whatever they provide.

So far only Demon really cater for the Amiga user, and that's somewhat half-hearted. You have to rely on a shareware package to access their service, and that was developed by a amateur radio ham.

The nearest equivalent to Netscape on the Amiga is a wobbly combination AmiTCP and AMosaic. And while we may have laughed at the recent Netscape upgrade debacle, I can assure you that they hold the key to the future.

Netscape, along with Sun and SGI - the graphics workstation manufacturers, and Macromedia - a company that produces multimedia authoring software, have joined forces to extend the capabilities of the World Wide

Web (WWW).

HTML, Hyper Text Markup Language, was a very simple affair invented to create the WWW. Over time this has been gradually extended, but now Netscape are accelerating the pace of development with their 'extensions'.

Sun has created Java, a C type language that brings animated 'applets' to the WWW. Netscape have built on this to provide JavaScript, which is designed to make it easier for people to author their own souped-up Web pages.

The Amiga Web surfer is going to get left behind. You can only use Java if you licence it. And no shareware developer is going to be able to afford that sort of cost. This is the land of the big money players. Are you listening Escom?

Was COMMODORE a new version of the Titanic with the Bosses partying while the Amiga headed for disaster? Does the future look exciting or have we reached the point of no return? Telescope to his, we hope, good eye, John Russell gives his view.

Printers

The Amiga owner is only a small fraction of the market. A fraction the big players can easily ignore. Take printer manufacturers, for instance.

Many of the new models appearing in the shops have no front panel controls.

Many of the new models appearing in the shops have no front panel controls. Things like 'changing fonts', 'head cleaning', and so on, are now controlled from 'your Windows software'.

So, if you aren't running Windows... tough. No wonder many power users are selling their A4000s for Pentium machines. Still, the weak will always give way first. If you are a dedicated Amigan, and want to take advantage of all these new facilities being developed for the PC users, then you have two choices. Buy a PC, or wait for 1997 and the PowerPC Amiga to materialize.

There's an old saying. 'If you can't beat them, join them'. IBM and Apple have realised this, and so has AT. We'll have to wait and see what the secret discussions between Apple and AT bring.

There may be exciting times ahead, but we must keep our nerve. **AUI**

Note: The views expressed in The Opinion Column in this **AUI**, or any other issue of the publication, are those of the person who has written the column and should not be necessarily ascribed to Amiga User International Magazine, its management, or its staff.

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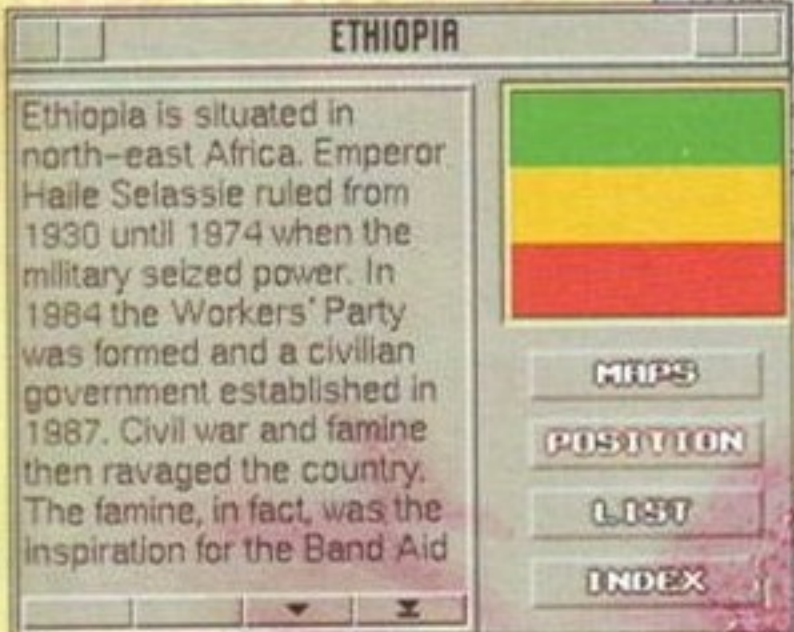
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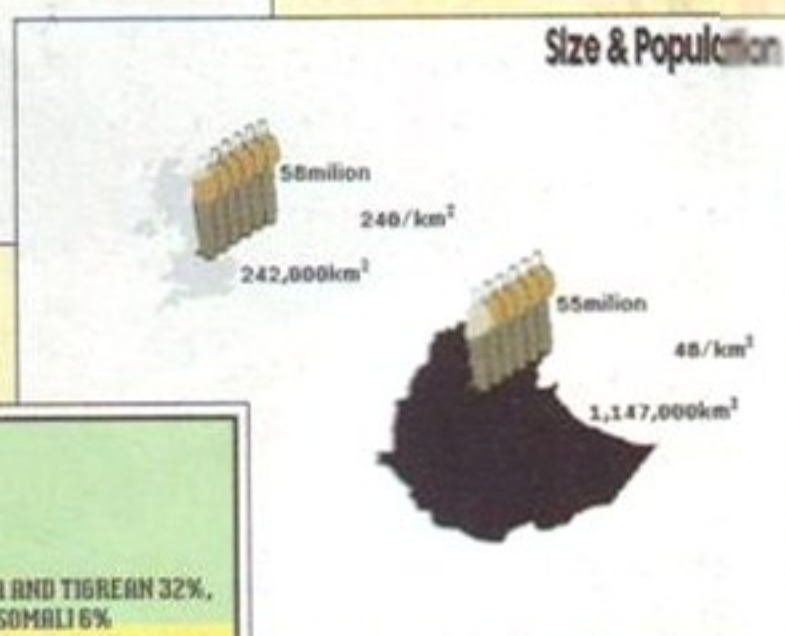


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